

The Transportation and Circulation section of this Draft Environmental Impact Report (Draft EIR or DEIR) describes the existing transportation and circulation system in the City of San Mateo, including roadway classifications, transit systems, bicycle, pedestrian, and rail service, and provides an analysis of the potential impacts of future development and planned improvements on this transportation system.

### 4.4.1 EXISTING SETTING

#### ROADWAY SYSTEM

San Mateo has a hierarchy of streets which serve different functions. These include freeways, arterials, collectors, local streets and alleyways, as shown on **Table 4.4-1**.

#### Freeways

Freeways route traffic through the community and are characterized by large traffic volumes and high-speed travel. There are two freeways in San Mateo: US 101 (Bayshore Freeway) and State Route (SR) 92 (J. Arthur Younger Freeway). State Route 280 also provides regional access to the community and is located just west of the City's Sphere of Influence.

The Land Use Element of the General Plan concentrates large-scale commercial development close to freeway ramps so that regional traffic is not routed through the community. The SR 92 corridor, for example, contains several high intensity commercial centers which are suitable for intensification, given their good freeway access and relative isolation from residential neighborhoods.

#### Arterials

Arterials link residential and commercial districts and serve shorter through traffic needs. Due to the heavier traffic on arterials, adjacent land uses are intended to be a mix of commercial and multi-family residential, such as along El Camino Real and San Mateo Drive. In San Mateo, however, many arterials are located in single-family neighborhoods. Examples include portions of Hillsdale Boulevard, Norfolk Street, and Alameda de las Pulgas.

Because the primary function of arterials is to move relatively high volumes of traffic, interruptions to traffic flow caused by turning movements at driveways and intersections should ideally be minimized. In San Mateo, however, established patterns of development have created driveways along most arterials. While the Land Use Element retains established single-family neighborhoods along many arterials, it is expected that increased traffic on these roadways will occur.

#### Collectors

Collector streets link neighborhoods to arterials and are not intended for through traffic but are nonetheless intended to move traffic in an efficient manner. Collectors should not form a continuous system, so that they are not used as convenient substitutes to arterials. In San Mateo, as drivers avoid congested thoroughfares, traffic diversion onto collectors has increasingly impacted neighborhoods close to such major arterials as El Camino Real and Hillsdale Boulevard.

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### Local Streets

Local streets are designed to serve only adjacent land uses and are intended to protect residents from through traffic impacts. New multi-family residential and commercial development should not have primary access on local streets, except where there is no feasible alternative.

Typical traffic capacities for local streets and the other roadway types in San Mateo are listed in **Table 4.4-1**.

**TABLE 4.4-1  
TYPICAL SAN MATEO ROADWAY CHARACTERISTICS**

Roadway Type	Number of Lanes	Number of Daily Vehicles
Freeway	6–10	120,000–250,000
Arterial	2–6	10,000–50,000
Collector	2–4	1,000–10,000
Local	2	500–1,000

### TRAFFIC ACCIDENT DATA

The Statewide Integrated Traffic Records System (SWITRS) is a centralized statewide records system used to monitor fatal and injury motor vehicle traffic accidents. In addition, a large proportion of the reported property damage-only accidents are also processed into SWITRS. The SWITRS reports are generated from over 100 California Highway Patrol (CHP) areas and over 500 city police departments, sheriff's offices, and local law enforcement agencies. According to the SWITRS 2007, there were no collisions that resulted in a fatality, 437 resulted in injuries, and 842 resulted in some form of property damage on San Mateo area roadways in 2007.

### STUDY AREA AND FORECAST SCENARIOS

The baseline (2005) and future (2030) levels of service (LOS) were evaluated at 60 signalized intersections based on the 2000 Highway Capacity Manual operations method. The level of service analysis was conducted for both the morning (AM) and evening (PM) peak periods. This is consistent with the revised City of San Mateo General Plan Circulation Element, which sets forth level of service standards that apply to both the AM and PM peak hours. **Table 4.4-2** below depicts the locations of these 60 signalized intersections.

**TABLE 4.4-2**  
**SIGNALIZED INTERSECTION PEAK HOUR LEVELS OF SERVICE**

#	Signalized Intersections	Year 2005 Conditions				Year 2030 Conditions			
		AM Peak Hr		PM Peak Hr		AM Peak Hr		PM Peak Hr	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	B Street and 1st Avenue	9.3	A	9.0	A	9.2	A	8.8	A
2	El Camino Real and 2nd Avenue	12.1	B	15.6	B	1.3	A	11.2	B
3	B Street and 2nd Avenue	10.6	B	11.8	B	10.7	B	8.7	A
4	San Mateo Drive and 2nd Avenue	11.5	B	12.3	B	8.4	A	8.2	A
5	Ellsworth Avenue & 2nd Avenue	10.9	B	12.2	B	9.6	A	10.5	B
6	B Street and 3rd Avenue	9.6	A	12.7	B	11.5	B	17.4	B
7	Delaware and 3rd Avenue	22.0	C	25.4	C	31.0	C	31.6	C
8	El Camino Real and 3rd Avenue	24.5	C	22.5	C	27.0	C	27.3	C
9	Ellsworth Avenue & Third Avenue	11.3	B	14.9	B	15.9	B	22.9	C
10	Humboldt Street & Third Avenue	20.9	C	23.3	C	14.1	B	13.0	B
11	Norfolk Street and 3rd Avenue	36.1	D	34.9	C	36.3	D	34.1	C
12	San Mateo Drive and 3rd Avenue	12.2	B	14.3	B	16.1	B	20.7	C
13	Mariners Island and 3rd Avenue	11.2	B	13.4	B	12.1	B	10.5	B
14	B Street and 4th Avenue	11.7	B	14.2	B	14.0	B	16.4	B
15	Delaware Street and 4th Avenue	17.2	B	22.9	C	23.0	C	39.9	D
16	El Camino Real and 4th Avenue	17.1	B	19.3	B	16.0	B	37.0	D
17	Humboldt and 4th	19.0	B	19.1	B	30.8	C	28.6	C
18	San Mateo Drive and 4th Avenue	12.5	B	15.1	B	12.5	B	20.9	C
19	B Street & Fifth	12.1	B	13.9	B	14.7	B	16.0	B
20	Delaware & Fifth	10.2	B	13.2	B	12.8	B	28.8	C
21	San Mateo & Fifth	10.0	A	10.6	B	9.7	A	11.4	B
22	Delaware Street & Ninth Avenue	9.6	A	11.1	B	10.6	B	14.9	B
23	El Camino Real and 17th-Bovet	19.3	B	22.8	C	16.2	B	20.2	C
24	Delaware Street and 19th Avenue	23.5	C	27.3	C	29.1	C	50.3	D
25	Grant Street and 19th Avenue	23.8	C	21.8	C	47.7	D	35.5	D
26	Alameda De Las Pulgas and 20th Avenue	18.1	B	18.6	B	17.6	B	18.9	B
27	El Camino Real and 20th Avenue	25.5	C	29.5	C	26.2	C	30.1	C
28	Delaware Street and 25th Avenue	10.5	B	10.4	B	9.8	A	11.1	B
29	El Camino Real and 25th Avenue	23.1	C	24.8	C	21.8	C	22.2	C
30	El Camino Real and 28th Avenue	8.1	A	9.0	A	23.0	C	23.3	C
31	El Camino Real and 31st Avenue	23.3	C	20.2	C	24.7	C	21.9	C
32	El Camino Real and 41st Avenue	6.7	A	6.3	A	6.4	A	6.4	A
33	El Camino Real and 42nd Avenue	21.7	C	26.3	C	17.2	B	25.2	C
34	Pacific Blvd. and 42nd Avenue	20.6	C	24.0	C	18.3	B	28.4	C
35	El Camino Real and Barneson Avenue	7.5	A	6.9	A	8.8	A	7.0	A

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**TABLE 4.4-2 (CONT.)**

# Signalized Intersections		Signalized Intersection Peak-Hour Levels of Service							
		Year 2005 Conditions				Year 2030 Conditions			
		AM Peak Hr		PM Peak Hr		AM Peak Hr		PM Peak Hr	
Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS		
36	Campus Drive and Hillsdale Blvd.	9.9	A	12.2	B	10.0	A	12.5	B
37	Delaware Street and Concar Avenue	29.5	C	35.6	D	27.6	C	42.3	D
38	Grant Street and Concar Avenue	19.9	B	22.0	C	16.9	B	20.7	C
39	SR 92 WB Ramps and Concar Avenue	10.5	B	10.8	B	18.9	B	16.4	B
40	El Camino Real at Crystal Springs	20.4	C	14.2	B	59.5	E	21.7	C
41	Delaware Street and Peninsula Avenue	9.1	A	9.7	A	9.6	A	9.7	A
42	Delaware Street and Poplar Avenue	27.3	C	27.1	C	30.0	C	28.0	C
43	El Camino Real and Hillsdale Interchange	37.3	D	40.1	D	41.5	D	38.5	D
44	El Camino Real and Peninsula Avenue/Park	13.7	B	16.7	B	10.0	B	17.8	B
45	El Camino Real and Poplar Avenue	15.8	B	15.0	B	23.4	C	14.9	B
46	El Camino Real and Tilton Avenue	11.6	B	10.4	B	11.2	B	9.9	A
47	Mariners Island and Fashion Island	18.3	B	20.7	C	18.8	B	20.1	C
48	Norfolk Street and Fashion Island	23.1	C	30.7	C	33.3	C	34.8	C
49	SB US 101 and Fashion Island	22.0	C	20.9	C	20.8	C	17.6	B
50	Norfolk Street and Hillsdale Blvd.	35.7	D	34.1	C	36.7	D	34.8	C
51	Saratoga Drive and Hillsdale Blvd.	31.7	C	33.1	C	33.0	C	33.9	C
52	Humboldt Street and Peninsula Avenue	10.5	B	10.3	B	7.6	A	9.3	A
53	Humboldt Street and Poplar Avenue	11.7	B	11.7	B	13.6	B	12.7	B
54	San Mateo Drive and Peninsula Avenue	14.1	B	13.9	B	14.1	B	16.1	B
55	San Mateo Drive and Poplar Avenue	12.2	B	12.3	B	12.4	B	11.7	B
56	Delaware Street and Saratoga Avenue	15.7	B	19.4	B	18.4	B	20.1	C
57	Saratoga Avenue and Franklin Pkwy.	10.4	B	4.6	A	19.0	B	12.8	B
58	NB 101 and Hillsdale Blvd.	21.2	C	23.7	C	25.9	C	25.9	C
59	SB 101 and Hillsdale Blvd.	4.1	A	15.4	B	6.1	A	17.0	B
60	Baker Way and Fashion Island	14.4	B	18.6	B	12.2	B	18.9	B

  = denotes unacceptable LOS according to city of San Mateo LOS Policy  
 Note: Year 2030 Conditions include improvements currently under construction

### EXISTING FREEWAY TRAFFIC VOLUMES AND OPERATING CONDITIONS

Because of its location in the Bay Area, San Mateo is a focal point for traffic. The City is at the crossroads of two major freeways, is centrally located between San Francisco and Santa Clara County's "Silicon Valley," and has direct access to the East Bay and coast via SR 92. As a result, heavy traffic conditions characterize most arterials and the two highways in San Mateo. Average daily traffic rates for US 101, SR 92, and El Camino Real are shown in **Table 4.4-3**.

Increased traffic in San Mateo has been noticeable in recent years. This has been evident on the freeways where traffic volumes have increased on US 101 and SR 92 between 0.4 percent and 5.2 percent from 2000 and 2005 as shown on **Table 4.4-3**. This increase in traffic is due to growth on the Peninsula in general and a regional imbalance of where people live and work. However, traffic on El Camino Real (south of SR 92) decreased 35.5 percent between 2000 and 2005 as shown in **Table 4.4-3**. This is mostly attributable to improvements to the roadway network that redistributed traffic to other areas of the City. The most significant improvements have been near the 3<sup>rd</sup> & 4<sup>th</sup> interchange with US 101 and at the Hillsdale/US 101 interchange, which have most likely led to an increase in usage of US 101 relative to El Camino Real.

San Mateo has a substantial employment base of its own, causing significant commute traffic into the City in the morning and away from the City in the evening. The College of San Mateo contributes to congestion on SR 92, particularly in the morning. Both westbound and eastbound congestion occurs on SR 92 during the evening as commuters travel to the coast, connect with I-280, or return to the East Bay. Congestion on US 101 occurs during both morning and evening peak periods.

**TABLE 4.4-3  
AVERAGE DAILY TRAFFIC (ADT) VEHICLE VOLUMES**

<b>Location</b>	<b>2000</b>	<b>2005</b>
US 101 (north of East Third Avenue)	251,000	256,751
US 101 (north of Hillsdale Boulevard)	244,000	245,007
SR 92 (east of US 101)	143,000	150,429
SR 92 (west of US 101)	113,000	117,689
El Camino Real (SR 82) [north of Crystal Springs Road]	30,500	30,497
El Camino Real (SR 82) [south of SR 92]	45,000	29,026

**RECENTLY COMPLETED IMPROVEMENTS**

Improvements have been constructed at the following intersections since the April 8, 2005, Traffic Mitigation Report:

- Grant Street and 19<sup>th</sup> Avenue – add second southbound left-turn lane
- Delaware Street and Concar Drive – add eastbound right-turn lane and second northbound left-turn lane
- Hillsdale Boulevard and El Camino Real – add dedicated northbound ramp right-turn lane to eastbound Hillsdale Boulevard and add a right-turn lane from eastbound Hillsdale Boulevard to the southbound El Camino Real ramp

**IMPROVEMENTS CURRENTLY UNDER CONSTRUCTION**

The analysis of signalized intersections under future (2030) conditions includes the following intersection improvements that are programmed, currently under construction, or recently completed:

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- Southbound US 101 Ramps and Fashion Island Boulevard – add second southbound left-turn lane and second eastbound through lane
- Bridgepointe Parkway and Bridgepointe Circle – install traffic signal
- Humboldt Street and Fourth Avenue – restripe northbound through lane to shared through/right-turn lane

These improvements have been funded by direct developer contributions and traffic mitigation fees.

**Table 4.4-2** summarizes the baseline (2005) and future (2030) level of service projections at the signalized study intersections. All of the signalized study intersections operate at acceptable levels of service (mid-D LOS or better with an average delay of less than 45 seconds) under baseline conditions.

The intersections of El Camino Real and Crystal Springs, 19th Avenue and Grant Street, and 19th Avenue and Delaware Street are projected to exceed the City's level of service standard by 2030, if anticipated levels of development are realized.

### TRANSIT SYSTEM

Transit service is provided by the Peninsula Corridor Joint Powers Board (Caltrain) and the San Mateo County Transit District (SamTrans). Both extend service throughout San Mateo County and into adjoining San Francisco and Santa Clara counties. ParaTransit services are provided by the Redi-Wheels Program of SamTrans and private taxi companies.

Future congestion of San Mateo roadways will necessitate a fundamental shift away from automobile travel to transit services. This will especially be true for peak period commute travel as the region's highways become increasingly clogged by motorists. In 2000, transit played a modest role in the circulation system. However, in comparison to many other cities throughout California, San Mateo has a higher percentage of transit riders. According to the 2000 Census, approximately 6.2 percent of the San Mateo workforce used public transit to commute to work, which is slightly higher than the 5.1 percent of Californians on average. Generally, cities in the San Francisco Bay Area have higher percentages of commuters using public transit. Even though a significant percentage of workers in San Mateo use public transit, the public transit system is somewhat limited in its service.

### Bus and Shuttle Service

Shuttle services are a key way to provide feeder service as well as local circulation. SamTrans and Caltrain shuttle services are complementary and integrated, not duplicative. Several SamTrans routes operate in San Mateo, with major transfer points located at the downtown San Mateo Caltrain Station in the northern portion of the City and El Camino Real and Hillsdale Boulevard in the southern portion. Express lines operate daily into San Francisco during the morning and return in the evening. Most of the local routes are located in the midsection of town, extending in a north/south direction on arterials such as El Camino Real, Alameda de las Pulgas, Delaware Street, and Norfolk Street. Service is also provided on Hillsdale Boulevard, SR 92, Parrott Drive, and Polhemus Road to the outlying east/west regions.

Free commuter shuttles are available at the Hillsdale Caltrain Station and within the Bridgepointe business area. These commuter shuttles are funded through grants and City and employer

participation. The shuttle service operates during commute hours between transit stations and major employment areas. The Norfolk Area Shuttle serves the areas in the vicinity of SR 92 between Delaware Street and Norfolk Street. The Campus Drive Area Shuttle operates between the Hillsdale Station and the Campus Drive office development. The Mariners Island Area Shuttle operates from the Hillsdale Station, serving a business park off Saratoga Drive before continuing to serve participating businesses in Foster City near SR 92. This shuttle stops along Mariners Island Boulevard, adjacent to the Bridgepointe Shopping Center in San Mateo. The North Foster City Shuttle also serves employers in the area of the Bridgepointe Shopping Center in addition to other Foster City area employers. It transports riders to the Millbrae Station for BART and Caltrain rail access.

### **AMTRAK**

AMTRAK does not provide passenger rail service within San Mateo County. The closest AMTRAK station is at the Oakland Coliseum Airport located at 700 73<sup>rd</sup> Avenue in Oakland.

### EXISTING BICYCLE AND PEDESTRIAN SYSTEM

#### **San Mateo Bikeways System**

Bicycling has been steadily gaining in popularity in recent years as a recreational activity and a sustainable means of transportation. San Mateo is well suited for bicycling due to its pleasant climate, relatively flat terrain, close spatial distribution of services, and varied scenic amenities. The City and County are responsible for planning, constructing, and maintaining the bikeways system.

The Bikeways System generally provides good access to the more important bicycle destination areas. This includes access within a few blocks of all schools, parks, and train stations, and direct access to the three high schools and the College of San Mateo.

Planned bikeway improvements constitute recommendations for improvements to the existing system. The actual design and type of these facilities may be altered due to physical constraints identified in the field. Priorities for improvements are indicated in the Circulation Element of the proposed General Plan, policy C 4.1: Bikeways System, which also calls for coordination with the countywide bikeways system.

A major inadequacy with the system is the high reliance on bicycle routes on major streets to provide critical linkages. Bike routes consist merely of signs which guide the cyclist and caution the motorist that there is a higher likelihood of bicycles being present. Bicycle lanes and paths provide semi-exclusive and fully exclusive "right-of-way" to the cyclist. Lanes and paths are safer and more enjoyable to cyclists, but their development is more costly and difficult due to the extra space needed.

#### **San Mateo Pedestrian System**

Ideally, services such as jobs, schools, shopping, and recreation facilities are within walking distance of where people in the community live. Generally, San Mateo has a good distribution of these services relative to residential neighborhoods. The distribution of retail centers includes ten neighborhood shopping areas, two regional centers, the Central Business District, and the El Camino Real commercial strip. Sixty-five percent of all San Mateo households are within walking distance of at least one of these retail centers.

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Households east of the Bayshore Freeway have the best pedestrian access to recreation facilities. Households in the northwest and southwest portions of the City have the poorest pedestrian access to these facilities. It is the intent of the City to improve pedestrian accessibility to recreation facilities in neighborhoods where it is most limited. (See the Open Space, Conservation, and Recreation Element of the proposed General Plan for discussion of the parks distribution.)

Physical barriers such as US 101 and the rail corridor impede circulation on the bikeways system in some areas. General linkage improvements are needed to some schools, major office parks, and recreational areas, such as Sugarloaf Mountain, Crystal Springs Reservoir, and Shoreline Park.

East/west access over US 101 is limited and considered potentially dangerous in areas due to high speeds and volumes of traffic, necessary ramp crossings, and minimal area for exclusive bicycle/pedestrian travel. Critical links include the Peninsula Avenue, Third Avenue, and Hillsdale Boulevard crossings.

North/south bikeways access in the Hillsdale area, east of El Camino Real, is lacking. The future roadway system within the Bay Meadows II redevelopment site will become critical links in the bikeways system.

SamTrans and Caltrain provide limited facilities for the transport of bicycles. Bicycle racks on buses would encourage more bicycle use between the hilly and lowlands areas. The Caltrain Bike Parking and Access Plan includes improvements and innovative ideas to address the demand for bikes on board the trains.

In some cases, adequate right-of-way is not available to accomplish intended bikeways improvements. The City will need to purchase right-of-way or require its dedication as a condition of development project approval. Dedication is required where a development project creates the need for the bikeways improvement and where the mitigation is reasonable (i.e., where the severance impact on the property is not excessive to the degree that it is greater than the benefit to the bikeways system).

It is the City's policy to require the installation of curb, gutter, sidewalk, and wheelchair curb ramps as a condition of project approval for all applicable development proposals. With the exception of areas within the San Mateo Park neighborhood and isolated cases throughout the community, sidewalks are provided citywide. Wheelchair access, however, is restricted in many areas due to the past placement of utility poles, streetlights, signs, and street landscaping within the sidewalk area. All public projects are designed to be wheelchair accessible, and requests from the public to install wheelchair ramps at specific locations are responded to by the City, where feasible. These ramps are also beneficial for use by adults with strollers and the elderly.

As development occurs in San Mateo, traffic increases cumulatively. When an intersection exceeds the adopted level of service standard, intersection improvements are recommended. To provide an increase in capacity at an intersection, additional lanes may be added at the intersection's approach, which may have a negative impact on bicycle and pedestrian mobility through the intersection. The City should value and consider both pedestrian and bicycle accessibility and mobility needs when designing roadway improvements in conformance with the City's Sustainable Incentive Plan (SIP).



A bicycle and pedestrian over crossing in the vicinity of Hillsdale Boulevard over US 101 has been identified as an essential connection between the neighborhoods of San Mateo and destinations such as the Bay Trail which is currently separated by US 101.

Through strategic capital improvements, programming, and better internal coordination of bicycling projects, bicycling will become safer, more convenient, and more accessible in all reaches of the City.

### **Future Bicycle and Pedestrian System**

Bicycle and pedestrian mobility play a significant role in the City's Sustainable Initiatives Plan. By 2020, the City goal is to increase mode share for pedestrian and bicycle travel to 30 percent for trips of 1 mile or less. As developments occur in the City, there will be an additional burden placed on the bicycle and pedestrian networks. The Mitigation Fee Program will be used for funding off-site pedestrian and bicycle improvements needed to create and maintain a safe and logical bikeways system and walkable community. The City will develop master plans for both bicycle and pedestrian networks throughout San Mateo. Through this process, it is anticipated that a list of capital improvement projects will be generated to identify necessary improvements or gaps in the system. These improvements, along with development of the master plans, will be funded through the Mitigation Fee Program.

### **RAIL SERVICE**

Rail service is provided by Caltrain. The 2008 progress report for Caltrain indicates that for the third year in a row, the commuter railroad posted record-breaking ridership and recorded the highest annual ridership in the railroad's 145-year history.

In fiscal year 2008, Caltrain carried nearly 12 million riders, up 8.6 percent from the previous year. Revenue was \$40.1 million, up 15.1 percent from fiscal year 2007. Some new riders were seeking relief from high gas prices, but some were attracted to Caltrain's Baby Bullet express service. Since the service was introduced in 2004, ridership has increased 48 percent.

The 100-year-old railroad bridges that cross Tilton Avenue, Monte Diablo and Santa Inez streets, and Poplar Avenue in San Mateo will be replaced to meet current seismic standards. In addition, the bridge that crosses Poplar Avenue will be raised to improve access to the neighborhood for emergency vehicles, such as fire trucks. New retaining walls will be built along the right-of-way to support the track embankments. The abutments, which hold up the bridges, will be retrofitted and finally, the bridges themselves will be replaced. The project will begin in summer 2009 and take approximately one year to complete.

Caltrain plans to electrify the railroad by 2015. Not only will electrification reduce emissions, it will also allow Caltrain to offer more frequent service; however, the overhead contact system of poles and wires would result in changes that would increase visual clutter in some locations and be perceived as negative by some residents and business occupants. Because of these visual changes, the City encourages the use of headspans to lighten overhead elements in sensitive areas.

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Additionally, the City will coordinate with Caltrain to ensure aesthetic treatments of overhead poles and wires throughout San Mateo.

Other transit projects that serve or will serve the City of San Mateo include high-speed rail, Dunbarton Rail, and AC Transit regional express service.

Most of the City's area is within a quarter mile of bus routes; however, there is substantially less accessibility to designated bus stops. It is SamTrans' policy to restrict passenger boarding and alighting to designated bus stops.

Bus service limitations are also in scheduling. Local and express service is generally provided up until 7 PM, resulting in a lack of nighttime bus service for several areas of the City. Late night service occurs on El Camino Real and Delaware Street. Local bus service to the train stations is limited to standard commuter times, allowing little schedule flexibility in bus/train transfer.

SamTrans operates express bus service at the US 101/SR 92 park-and-ride lot, which was developed in 1987. The lot, which is substantially underutilized, contains approximately 150 parking stalls, with an expansion potential of 150 more stalls.

SamTrans' marketing and promotional effort has included a school outreach program, market studies for employee complexes, expansion of signage, targeted promotions for special events such as the County Fair, 49er football games, media usage, and efforts to increase employer purchase centers for passes, among other activities. It is intended that the City work closely with SamTrans to achieve an optimal level of bus service in San Mateo and to ensure that adequate transit information is made available to the community.

The importance of Caltrain is evident in light of the projected traffic increases and limited expansion potential of US 101, the major north/south transportation corridor that parallels the rail line on the Peninsula.

Increased Caltrain ridership is limited by a number of factors: the lack of a convenient downtown terminal in San Francisco, insufficient parking at train stations, limited bus/train transfer, and schedule limitations, including the number of daily trains and the times of operation and lack of connecting bicycle pathways.

A Joint Powers Board (JPB) between the local transit operators and San Francisco, San Mateo, and Santa Clara counties has been formed to facilitate coordinated transit management, public acquisition of the railroad right-of-way which was owned by Southern Pacific Transportation Company, and transition of Caltrain to a transit system capable of providing frequent service, comparable to BART. Public acquisition of the railroad right-of-way operations corridor was completed on December 27, 1991. Transfer of individual train station site ownership is presently being pursued by the JPB.

There are three Caltrain stations in San Mateo: Downtown, Hayward Park, and Hillside. The San Mateo Travel Model shows that the majority of passengers drive alone to the stations and park their cars. Improvement of San Mateo train stations is considered a key element in increasing local transit usage. This should include parking lot expansion and improved bus access.

The Downtown Station is sited at 2 North B Street, north of First Avenue. Parking for the station is provided on the state-owned commuter lot located to the north of First Avenue and containing approximately 175 stalls.

The Hayward Park Station is sited on the east side of the railroad tracks just north of Concar Drive. Parking for commuters is provided by a 130-stall parking lot accessible from Concar Drive, west of Delaware Street. Access to the station from the west of the tracks is limited due to the lack of a grade-separated crossing. Presently, the station is located behind a commercial building, which does not offer pedestrian-friendly access from Delaware Street. Redevelopment of the surrounding area into a transit-oriented community will provide improved pedestrian access to the station. Ideally, pedestrian and bicycle access should also be provided to Trinta Park located to the southwest of the Hayward Park Station.

The Hillsdale Station is the most heavily used station in San Mateo and provides transit access to several major destination points: Hillsdale Shopping Mall, Bay Meadows Phase II Specific Plan transit-oriented development, and San Mateo County Events Center. It is located on the west side of the tracks at El Camino Real, north of Hillsdale Boulevard. Three commuter parking lots are available, totaling approximately 520 parking stalls.

The planned relocation of the Hillsdale Station consists of installing a raised platform, which will provide safer access and easier transfers to buses and shuttles. Improved vehicular access will also be an important component of the relocated station. The new station will add approximately 500 parking stalls to the park-and-ride lots. Future development near the station should be designed to take maximum advantage of the proximity to transit.

Because Caltrain is predominantly at-grade, local circulation is impeded where crossings do not exist and during times when crossing gates are closed. The majority of track crossings exist in the northern section of the City and in the Downtown. Only four crossings – SR 92, Hillsdale Boulevard, 25th Avenue, and Laurie Meadows Drive/42nd Avenue – are located south of Ninth Avenue to the Belmont border, a distance of approximately 3 miles.

Only seven of the total 18 rail crossings in San Mateo are grade-separated, four of which are scheduled to be replaced to meet current seismic standards due to disrepair and inadequate vertical clearance. These improvements are scheduled for the summer of 2009 and include the Poplar, Tilton, Monte Diablo, and Santa Inez bridges. Problems have resulted from the at-grade system. During peak hours, the train causes a backup on nearby streets. Grade separation of the rail line would allow unobstructed street circulation and improved traffic and pedestrian safety.

The key purpose of grade separations is to improve local traffic circulation and safety. The San Mateo County Transportation Authority's 2004 Measure A Expenditure Plan provides a list of candidate projects for new or upgraded grade separations.

The Peninsula Corridor Joint Powers Board is preparing footprint studies for the Hillsdale and Downtown rail corridors. Slight raising of the alignment in the vicinity of the proposed 31<sup>st</sup> Avenue grade separation will facilitate relocation of the existing station north to between 28<sup>th</sup> and 31<sup>st</sup> avenues and will avoid requiring realignment of El Camino Real. While a range of alternatives is being considered for the rail alignment through downtown San Mateo, the City has established its preference for a depressed alignment that would avoid impacts to the existing street system and would reduce access to adjacent properties.

For most working parents who use child care outside their homes, the commute to work is impacted by the location of child care. Locating child care along major transit routes and in or adjacent to transit stations, such as in the redevelopment and/or relocation of the city's three CalTrain stations, can reduce the miles driven and even enable parents to use public transit.

## 4.4 TRANSPORTATION AND CIRCULATION

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### Future High-Speed Rail Service

The California High-Speed Rail Authority was established in 1996 and is the state entity responsible for planning, constructing, and operating a high-speed train system serving major metropolitan areas in California. In August of 2000, Governor Gray Davis signed Assembly Bill (AB) 1703, which extended the tenure of the California High-Speed Rail Authority to December 31, 2003. He also included \$5 million in the state budget to begin the environmental clearance for a statewide high-speed train system. In 2002, the legislature made the rail authority permanent.

In July 2008, the California High-Speed Rail Authority selected the Pacheco Pass – San Francisco and San Jose Alternative as the preferred corridor and alignment for the future high-speed train service. Proposition 1A, Reliable High-Speed Passenger Train Bond Act, was passed by the California voters in November 2008. Proposition 1A authorized the issuance of \$9.95 billion in bonds to establish high-speed rail within the adopted corridors. Initial implementation of the system will include a segment from San Diego and Los Angeles, a segment between San Jose and San Francisco, and a test track segment in the Central Valley.

With the certification of the Statewide Final Program-Level Environmental Impact Report /Environmental Impact Statement (EIR/EIS), the authority has begun implementation of the 800-mile high-speed train system serving Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego. High-speed trains will be capable of maximum speeds of 220 miles per hour with an expected trip time from San Francisco to Los Angeles of 2 hours and 40 minutes. The system is forecast to potentially carry over 100 million passengers per year by 2030.

Now that there is a decision to go forward with development of the high-speed rail system, the California High-Speed Rail Authority and Federal Rail Authority will focus future project analysis on alignment and station options selected through this program environmental review process. Site-specific location and design alternatives for the alignment and station options selected at the program level, including impact avoidance and minimization alternatives and strategies, would be further investigated and considered during Tier 2, project-level environmental review.

The design of the high-speed rail alignment will continue to evolve over the coming months. The starting point will be the assumptions used in the program-level environmental analysis, which includes the following key design assumptions:

- High-speed rail train from San Jose to San Francisco will share Caltrain alignment.
- There will be no high-speed train station in San Mateo.
- High-speed trains may share track with Caltrain.
- Speeds for the trains would be between 78.6 mph and 120+ mph.
- Crossing would be grade separated.
- Tracks would be above grade.

Design of the proposed high-speed rail alignment will continue in parallel with the environmental review. Preliminary engineering and project-level environmental review will commence to the

extent needed to assess site-specific issues and potential environmental impacts not already addressed in the Statewide Final Program EIR/EIS. Project-level environmental review would focus on a portion or portions of the proposed high-speed rail system and would provide further analysis of potential impacts and mitigation at an appropriate site-specific level of detail to obtain needed permits and to implement high-speed rail projects. Also, after completing this program environmental process, the authority will begin working with local governments, transportation agencies, and private parties to identify right-of-way preservation needs and protective advance acquisition opportunities consistent with state and federal authority and requirements.

Previous City of San Mateo General Plan policies have strongly encouraged a depressed rail alignment due to the potential impacts associated with a raised alignment. However, the existing policies were developed prior to the proposal for high-speed rail within the Peninsula Corridor Joint Powers Board (JPB) right-of-way. The previous policies reflect the sense at the time that the costs for grade separating the downtown at-grade rail crossings would be prohibitive and the improvements were not likely within the foreseeable future. Introduction of high-speed rail within the corridor and designation of the San Jose to San Francisco segment as one of the segments selected for early implementation has significantly changed the potential horizon and likelihood of downtown grade separation. As a result, City staff is proposing strengthening the General Plan policies related to the rail corridor and potential grade separation. The proposed Circulation Element includes the following policies:

- C 3.5: Grade Separation of Rail Line.** Promote the elimination of existing at-grade crossings to improve local circulation and safety.
- C 3.6: Below Grade Rail Line.** Depress the rail line through the downtown with street crossings remaining at grade as Caltrain service is increased and high speed rail through the corridor is implemented. Depressing the rail line in downtown should include examination of a tunnel alternative and potential use of air rights.
- C 3.7: San Mateo Rail Corridor Transit-Oriented Development Plan (Corridor Plan).** Improve east-west access via new grade-separated rail crossings at 28<sup>th</sup> and 31<sup>st</sup> Avenues.

### AIRPORTS

The nearest major airport to the City of San Mateo is San Francisco International Airport located between San Bruno and Millbrae, which is approximately 4.5 miles north of the city limits. San Carlos Airport is located approximately 2.5 miles south of the city limits.

### 4.4.2 REGULATORY FRAMEWORK

#### STATE

#### California Department of Transportation

The California Department of Transportation (Caltrans) operates and maintains US 101 and SR 280, which provide regional access to the City of San Mateo and the neighboring cities within the Peninsula. Additionally, the Caltrans Division of Planning has four major functions including the Office of Advance Planning, Regional Planning/Metropolitan Planning Organization, Local Assistance/IGR/CEQA, and System Planning Public Transportation.

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The Office of System Planning Public Transportation prepares Transportation Concept Reports (TCRs) in coordination with the regional planning partners and other district divisions. TCRs are long-term planning documents which evaluate current and projected conditions along specified routes. TCRs establish 20-year planning visions and concepts and recommend long-term improvements to achieve the concept.

### **California Transportation Commission**

The California Transportation Commission (CTC) is responsible for the programming and allocation of funds for the construction of highway, passenger rail, and transit improvements throughout California. CTC also advises and assists the Secretary of Business, Transportation and Housing Agency and the legislature in formulating and evaluating state policies and plans for California's transportation programs. The State Transportation Improvement Program (STIP) is a multiyear capital improvement program of transportation projects on and off the State Route System, funded with revenues from the State Route Account and other funding sources. STIP programming generally occurs every two years. State guidelines generally set the framework for regional and local planning efforts. State law requires the regional and local planning agencies to develop and submit a Regional Transportation Improvement Program (RTIP) every three years to the California Transportation Commission (CTC) and Caltrans. In the Bay Area, this plan is prepared by the Metropolitan Transportation Commission (MTC), the regional transportation planning agency, in cooperation with nine countywide Congestion Management Agencies (CMAs). MTC writes the RTIP, which along with the Caltrans Interregional Transportation Improvement Plan, goes to form the STIP, with the parts selected (to greater and lesser degrees) by the CTC. The RTIP is prepared every odd-numbered year for STIP adoption by the CTC in even-numbered years.

### **REGIONAL**

#### **Metropolitan Transportation Commission**

The majority of federal, state, and local financing available for transportation projects is allocated at the regional level by the Metropolitan Transportation Commission, the transportation planning, coordinating, and financing agency for the nine-county Bay Area. The current regional transportation plan, known as Transportation 2030, was adopted by MTC on February 23, 2005. Transportation 2030 specifies a detailed set of investments and strategies throughout the region from 2005 through 2030 to maintain, manage, and improve the surface transportation system. The plan specifies how anticipated federal, state, and local transportation funds will be spent in the Bay Area during the next 25 years. Most of this "committed funding" will go toward protecting the region's existing transportation infrastructure. Improvements to the US 101/Greenbrae interchange are included in the 2030 Regional Transportation Plan as a Regional Measure 2 funded project.

### **LOCAL**

#### **City/County Association of Governments of San Mateo County**

The City/County Association of Governments (C/CAG) of San Mateo County has been designated as the Congestion Management Agency (CMP) to address San Mateo's unique transportation issues. C/CAG is responsible for programming funding for all transportation programs in San Mateo County. The C/CAG Board includes representatives from each city and town in San Mateo County. C/CAG deals with issues that affect the quality of life in general:

transportation, air quality, stormwater runoff, hazardous waste, solid waste and recycling, land use near airports, and abandoned vehicle abatement.

### San Mateo County General Plan

The intent of the San Mateo County General Plan Circulation Element is a balanced, integrated transportation system with an overall strategy of providing a high quality of transportation service by operating the road system at high efficiency while facilitating additional transit, bicycle, and pedestrian modes of travel.

As one of the communities located within San Mateo County, the City of San Mateo is impacted by County policies regarding traffic and circulation. The County recently completed a General Plan update, which includes revisions to countywide transportation policies.

### 4.4.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

The California Environmental Quality Act (CEQA) Guidelines state that a project will be expected to result in a significant transportation and circulation impact if it causes an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. For the purpose of this DEIR, impacts are considered to be significant if the following could result from the implementation of the proposed project:

- 1) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio for freeways, or congestion at intersections).
- 2) Exceed, either individually or cumulatively, a level of service (LOS) standard established by the City of San Mateo for designated roads or highways.
- 3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- 4) Substantially increase hazards due to a design feature (i.e., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- 5) Result in inadequate emergency access.
- 6) Result in inadequate parking capacity.
- 7) Conflict with adopted policies, plans, or programs supporting alternative transportation.

Based on the City of San Mateo's current transportation impact criteria, the general significance criteria are interpreted as follows in evaluating the proposed General Plan. The following significance criteria are from the current 1997 City of San Mateo General Plan:

- *Guiding Policy C2.1: Acceptable Levels of Service.* Adopt a Level of Service no worse than mid LOS D, average delay of 45.0 seconds, as the acceptable Level of Service for all intersections within the City.

## 4.4 TRANSPORTATION AND CIRCULATION

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US 101 and SR 92 Impact Criteria: Significant traffic impacts on freeway segments are identified as when a project causes:

- The volume on the freeway segment to exceed its capacity (cause LOS E or better to deteriorate to LOS F); or
- An increase in the amount of traffic on a freeway segment already exceeding its capacity by more than 1 percent of the freeway segment's design capacity.

A roadway design impact is considered significant when:

- A project introduces a design feature that presents safety concerns.

An emergency vehicle access impact is considered to be significant if it would:

- Provide inadequate design features to accommodate emergency vehicle access and circulation.

A pedestrian impact is considered significant if it would:

- Disrupt existing pedestrian facilities;
- Interfere with planned pedestrian facilities; or
- Create inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards.

A bicycle impact is considered significant if it would:

- Disrupt existing bicycle facilities;
- Interfere with planned bicycle facilities;
- Conflict or create inconsistencies with adopted bicycle system plans, guidelines, policies, or standards; or
- Not provide secure and safe bicycle parking in adequate proportion to anticipated demand.

A transit impact is considered significant if it would:

- Result in a significant unanticipated increase in transit patronage; or
- Result in development that is inaccessible to transit riders.

### **Transportation/Traffic Issues Not Further Analyzed**

Due to the nature and scope of the proposed project (adoption of the General Plan Update), implementation of the project would not have the potential to result in a change in air traffic patterns at any airport in the area. No further analysis of this issue is required.



METHODOLOGY

Year 2030 traffic volumes were determined by the San Mateo travel demand model, which is the transportation planning tool used to estimate future travel demand. It is essentially a mathematical model developed to simulate observed travel patterns. A travel demand model requires many inputs, primarily the transportation network and the land use characteristics of an area. The model estimates how many trips people make, where the trips are coming from and going to, which mode of transportation (auto, transit) people use, and which roads or transit lines people use to get from their origin to their destination.

The transportation system is represented by a computerized network of lines, links, and nodes. The land use data, based on the Association of Bay Area Governments (ABAG) 2030 projections, describe the activities for a specific area that attract and produce traffic. The ABAG forecasts are used to forecast traffic in the model outside the City of San Mateo. For this study, the model was informed by ABAG Projections 2005.

Traffic is assigned to the transportation network based on many factors including auto availability, travel time, travel cost, and transit accessibility. Initially, the model estimates traffic for a 4-hour time period during commute hours. The 4-hour volumes, which are used for comparison, are then multiplied by factors to yield one-hour turning movement volumes. The factors are approximately 0.34 and 0.27 for AM and PM, respectively. These factors were determined from the peaking characteristics evidenced in the current 4-hour counts. Turning movements at intersections are the least accurate of the model outputs. Nevertheless, many studies require the evaluation of future levels of service at key intersections.

In order to increase the reliability of future turning movement estimates, adjustments are made based on the actual count data and the model's performance in the base year. This calibration/validation process ensures that the model replicates observed travel patterns.

**Table 4.4-4** summarizes the conversion of ABAG land use data into categories used in the General Plan. **Table 4.4-5** summarizes the anticipated citywide land use changes within the City of San Mateo. The land uses include all approved development projects plus other potential development anticipated by 2030 within the existing General Plan.

**TABLE 4.4-4  
LAND USE CONVERSIONS**

ABAG Land Use	Baseline ABAG (2005)	Baseline ABAG (2030)	Land Use Category for General Plan
Total Households	40,030	48,360	
Manufacturing Employment	2,206	3,406	Industrial Employment
Other Employment	11,147	17,348	Industrial Employment
<i>Subtotal:</i>	13,353	20,754	
Retail Employment	10,871	16,786	Retail Employment
Service Employment	21,057	32,513	Office Employment
Misc. Employment	559	727	N/A
Total Employment	45,840	70,780	

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**TABLE 4.4-5  
PROJECTED HOUSEHOLD AND EMPLOYMENT GROWTH**

Land Use	Baseline (2005)	Future (2030)	Difference (2030-2005)
Total Households	40,030	48,360	+8,330
Industrial Employment	13,353	20,754	+7,401
Retail Employment	10,871	16,786	+5,915
Office Employment	21,057	32,513	+11,456
Total Employment	45,840	70,780	+24,940

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Intersection Operations

**Impact 4.4.1** Implementation of the proposed General Plan Update would result in increased traffic volumes, delay, and a decrease in LOS on area intersections during peak hours. This impact is considered **potentially significant**.

Future traffic conditions with the proposed General Plan Update would see the following three study intersections experience a decline in LOS that would not meet the LOS standard of the proposed General Plan Update.

- Delaware Street and 19<sup>th</sup> Avenue
- Grant Street and 19<sup>th</sup> Avenue
- El Camino Real at Crystal Springs

Traffic delay increases on area intersections with implementation of the proposed General Plan are presented in **Table 4.4-6**.

**TABLE 4.4-6  
INTERSECTION LEVELS OF SERVICE FOR PROPOSED GENERAL PLAN**

Intersection <sup>1</sup>	2005 Existing Conditions		Year 2030 Conditions	
	Delay (sec)	LOS	Delay (sec)	LOS
1. B Street and 3rd Avenue (AM Peak)	9.6	A	11.5	B
2. Ellsworth Avenue & Third Avenue (PM Peak)	14.9	B	22.9	C
3. San Mateo Drive and 3 <sup>rd</sup> Avenue (PM Peak)	14.3	B	20.7	C
4. Delaware Street and 4 <sup>th</sup> Avenue (AM Peak)	17.2	B	22.9	C
Delaware Street and 4 <sup>th</sup> Avenue (PM Peak)	23.0	C	39.9	D
5. El Camino Real and 4 <sup>th</sup> (PM Peak)	19.3	B	37	D

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Intersection <sup>1</sup>	2005 Existing Conditions		Year 2030 Conditions	
	Delay (sec)	LOS	Delay (sec)	LOS
6. Humboldt and 4 <sup>th</sup> Avenue (AM Peak)	19.0	B	30.8	C
Humboldt and 4 <sup>th</sup> Avenue (PM Peak)	19.1	B	28.6	C
7. San Mateo Drive and 4 <sup>th</sup> Avenue (PM Peak)	15.1	B	20.9	C
8. Delaware and 5 <sup>th</sup> Avenue (PM Peak)	13.2	B	28.8	C
9. Delaware and 9 <sup>th</sup> Avenue (Am Peak)	9.6	A	10.6	B
10. Delaware and 19 <sup>th</sup> Avenue (PM Peak)	27.3	C	<b>50.3</b>	<b>D</b>
11. Grant Street and 19 <sup>th</sup> Avenue (AM Peak)	23.8	C	<b>47.7</b>	<b>D</b>
12. El Camino Real and 28 <sup>th</sup> Avenue (AM Peak)	8.1	A	23.0	C
El Camino Real and 28 <sup>th</sup> Avenue (PM Peak)	9.1	A	23.3	C
13. El Camino Real at Crystal Springs (AM Peak)	20.4	C	<b>59.5</b>	<b>E</b>
El Camino Real at Crystal Springs (PM Peak)	14.2	B	21.7	C
14. El Camino Real and Poplar Avenue (AM Peak)	15.8	B	23.4	C
15. Delaware Street and Saratoga Avenue (PM Peak)	19.4	B	20.1	C
16. Saratoga Avenue and Franklin Pkwy (PM Peak)	4.6	A	12.8	B

Source: Traffic Mitigation Report, 2008

Notes: **Bolded LOS identify intersections where the LOS standard would not be met (mid D LOS or better with an average delay of less than 45 seconds) under the proposed General Plan Update but will be met with mitigations described in detail in the DEIR.**

The following policy provisions are proposed in the General Plan Update to address traffic operations.

- C 2.1: Acceptable Levels of Service.** Maintain a Level of Service no worse than mid LOS D, average delay of 45.0 seconds, as the acceptable Level of Service for all intersections within the City.
- C 2.2: Traffic Improvement Master Plan.** Maintain a master plan for street system improvements necessary to accommodate future growth and maintain acceptable levels of service. Intended improvements within the time frame of the Plan are listed in Appendix D, and may be updated by Resolution of the City Council consistent with Policy C-2.1.
- C 2.3: Roadway Improvement Implementation.** Enact fiscal policies to provide that the roadway improvements listed in Appendix D are funded and accomplished throughout the timeframe of the General Plan to achieve the Level of Service standards set forth in Policy C-2.1
- C 2.4: Transportation Fee Ordinance.** Require new developments to pay for on-site improvements to meet the needs of development and their proportionate share of the costs for mitigating cumulative traffic impacts within the City of San Mateo. Utilize a Transportation Fee Ordinance to finance necessary off-site improvements equitably. The off-site improvements will include intersection and street

## 4.4 TRANSPORTATION AND CIRCULATION

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improvements to maintain intersection levels of service, traffic safety improvements and improvements to reduce single occupant vehicle trips such as bicycle system enhancements, pedestrian improvements, and trip reduction measures.

- C 2.5: Traffic Studies.** Require site-specific traffic studies for development projects where there may be a substantial impact on the local street system. Traffic impacts caused by a development project are considered to be unacceptable and warrant mitigation if the addition of project traffic results in a cumulative intersection level of service exceeding the acceptable level established in Policy C-2.1; where there may be safety hazards created; or where there may be other substantial impacts on the circulation system.
- C 2.6: Prioritization and Timing of Roadway Improvements.** Roadway improvements shall be periodically prioritized to be correlated with the distribution and pace of development, and to reflect the degree of need for mitigation.
- C 2.7: Exceeding the Acceptable Level of Service.** In addition to paying the transportation impact fee, a development project may be required to fund off-site circulation improvements which are needed as a result of project generated traffic, if:
- a. The level of service at the intersection drops below mid-level LOS D (average delay of more than 45 seconds) when the project traffic is added, and
  - b. An intersection that operates below its level of service standard under the base year conditions experiences an increase in delay of four or more seconds, and
  - c. The needed improvement of the intersection(s) is not funded in the applicable five-year City Capital Improvement Program from the date of application approval.
- C 2.10: Transportation Demand Management (TDM).** Participate in the TDM Program as outlined by the San Mateo City/County Association of Governments (C/CAG). Encourage TDM measures as a condition of approval for development projects, which are anticipated to cause substantial traffic impacts. C/CAG requires the preparation of a TDM program for all new development that would add 100 peak hour trips or more to the regional road network
- C 2.11: Transportation Demand Management (TDM) in Rail Corridor Transit-Oriented Development Plan (Corridor Plan).** Establish and implement a TDM program consistent with the Corridor Plan policy and program requirements for development within Transit-Oriented Development (TOD) areas.
- C 2.12: Transportation Demand Management (TDM) in Downtown.** Establish and implement a TDM program for development within the Downtown Core.

The majority of the signalized intersections will continue to operate at acceptable levels of service (mid D LOS with an average delay of less than 45 seconds). However, in 2030, with anticipated levels of development, three intersections will exceed the established level of service standard if development reaches the level anticipated by 2030.

Physical improvements will be required at the following intersections to maintain acceptable levels of service with the addition of future development. With the implementation of the proposed General Plan Update, including mitigations, none of the following intersections would fail to meet the City’s LOS standard of mid D or better.

- Delaware Street and 19<sup>th</sup> Avenue
- Grant Street and 19<sup>th</sup> Avenue
- El Camino Real at Crystal Springs

Diagrams of planned improvements at these three intersections are shown in **Appendix B**.

Mitigation Measures

- MM 4.4.1a Delaware Street and 19<sup>th</sup> Avenue: Restriping is called for at the intersection of Delaware and 19<sup>th</sup> Avenue. Specifically, four turning movements at this intersection will be restriped including (1) traveling south on Delaware, the through and left movements will be replaced with a left only arrow; (2) traveling north on Delaware, the through and right movements will be replaced with a through only movement; (3) traveling east on 19<sup>th</sup> Avenue, the right turn only will be replaced with a through and right turn movement; and (4) the all-way movement will be replaced with a left only arrow.
- MM 4.4.1b Grant Street and 19<sup>th</sup> Avenue: Restriping is called for at the intersection of Grant Street and 19<sup>th</sup> Avenue. Specifically, the right-hand turn lane traveling west on 19<sup>th</sup> Avenue will be replaced with a left and right arrow.
- MM 4.4.1c El Camino Real at Crystal Springs: Improvements to the intersection at El Camino Real and Crystal Springs Road include widening the curb lane to allow a right turn movement onto Crystal Springs Road from El Camino Real (southbound).

Mitigated levels of service are summarized in **Table 4.4-7** below.

**TABLE 4.4-7  
SIGNALIZED INTERSECTION MITIGATED LEVELS OF SERVICE**

Signalized Intersections	2030 Without Mitigation				2030 With Mitigation			
	AM Peak Hr		PM Peak Hr		AM Peak Hr		PM Peak Hr	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Delaware Street and 19th Avenue	29.1	C	50.3	D	24.1	C	27.4	C
Grant Street and 19th Avenue	47.7	D	35.5	D	37.1	D	39.0	D
El Camino Real at Crystal Springs	59.5	E	21.7	C	39.8	D	18.4	B

Note: Year 2030 Conditions include improvements currently under construction

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The improvements listed above under mitigation measures **MM 4.4.1.a** through **MM 4.4.1c** would result in level of service mid LOS D or better and all impacts being **less than significant**. Restriping and widening the curb in the existing right-of-way area would not result in potential environmental impacts associated with visual resources, noise, air quality, and growth inducement.

### Transit System

**Impact 4.4.2** Implementation of the proposed General Plan Update would result in an increased demand for transit service. This is considered a **less than significant** impact.

According to the 2000 U.S. Census, 21.9 percent of San Mateo residents use transit for their journey to work. Based upon the current transit mode split, it is reasonable to assume that implementation of the proposed General Plan Update would result in additional residential and non-residential trips and a corresponding increase in demand for transit service. In the long term, this could include increased frequency bus service with transit priority and transit-oriented development practices. However, the proposed General Plan Update accommodates a mix of residential densities, commercial uses, and pedestrian and bicycle facilities to promote options for movement beyond the use of motor vehicles and includes proposed enhancements to existing transit service.

No conflicts with current transit provisions or plans (e.g., roadway design that would conflict with transit service) are expected as a result of implementation of the proposed General Plan Update.

### General Plan Policies and Implementation Programs

The following policy provisions are proposed in the General Plan Update that address and support transit service.

**C 3.1: Increase Bus Ridership.** Strongly promote increased bus ridership and improved accessibility to bus transit.

**Implementation Program C 3.1:** Encourage SamTrans to implement the following bus service improvements:

- a. Evaluate the need to provide service in areas exceeding a quarter mile from local routes and designated bus stops, as shown on Figure C-4.
- b. Evaluate the need for improved bus service in high concentration employment centers, including: Downtown, Mariner's Island, Peninsula Office Park, Crossroads, and the Corridor Plan area among others as shown in the Land Use Element, Figure LU-2 (Employment Locations). Evaluate the need to improve bus service to the College of San Mateo, between schools and recreation facilities, and to special events.
- c. Promote increased usage of the Park-N-Ride lot at the US 101 and SR 92 Interchange.
- d. Promote increased bus ridership through an expanded Public Information Program such as at train stations, public institutions, and through TDM.

- e. Recognize the importance of complementary land uses, such as higher-density, compact development with pedestrian-friendly environments, to especially justify increasing levels of transit service.

**C 3.2: Caltrain.** Continue the City's strong support of Caltrain as an essential element of the overall circulation system on the Peninsula and in the City. Support the following rail service improvements:

- a. Continue to work with the Joint Powers Board which locally manages and oversees improvement plans for Caltrain.
- b. Increased service during non-commute periods and increase system capacity.
- c. Development of a Downtown San Francisco terminal within the vicinity of the Transbay Terminal or Financial District to improve commute service and linkage to other regional transit systems.
- d. Expenditure of Measure A (1/2-cent sales tax) funds and other available funds for grade crossing improvements at existing at grade crossings and where existing grade separations have inadequate vertical clearance above the crossing street.
- e. Caltrain Shuttle Bus Program.
- f. Caltrain's Project 2025 future vision includes three major phases of development: state of good repair, electrification enhancements and post-electrification enhancements. All three phases of the program will provide increased frequency of service to San Mateo and Peninsula residents and commuters.

Implementation of the above policy provisions would provide for continued and expanded transit service opportunities and would reduce potential transit impacts to a **less than significant** level.

### Mitigation Measures

None required.

### **Bicycle and Pedestrian Facilities**

**Impact 4.4.3** Implementation of the proposed General Plan Update would result in an increased demand for bicycle and pedestrian facilities. This is considered a **less than significant** impact.

According to the Census 2000, 2.7 percent of San Mateo residents used a bicycle to commute to work. Implementation of the proposed General Plan Update would result in additional residential and non-residential trips and a corresponding increase in demand for bicycle facilities, including safe and secure bicycle parking.

The project would increase pedestrian and bicycle use in the City in addition to anticipated growth in pedestrian and bicycle usage in the region. However, the proposed General Plan Update includes provisions to accommodate a mix of residential densities, commercial uses,

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and pedestrian and bicycle facilities to promote options for movement other than the use of motor vehicles. The proposed General Plan includes proposed new bikeways and trails that would connect with existing trails and provide new facilities to accommodate its contribution to this demand. The environmental effects of bike and trail expansions and improvements are programmatically addressed in the technical sections of this Draft EIR.

### General Plan Policies and Implementation Programs

The following policy provisions in the General Plan Update address and enhance pedestrian and bicycle uses.

**C 4.1: Bikeways System.** Develop a bicycle master plan and prioritized capital improvement program that creates and maintains a safe and logical bikeways system; supports the City's Sustainable Transportation Actions; and is coordinated with the countywide system.

*Implementation Program C4.1:* In developing circulation projects, consider all modes of travel, including access to transit stations and stops, and bicycle and pedestrian path connections between work, home, school, and commercial services.

*Implementation Program C4.2:* Partner with local jurisdictions and the County of San Mateo to extend bicycle and pedestrian path connections so that circulation is uninterrupted between the City and adjacent jurisdictions.

*Implementation Program C4.3:* Incorporate convenient bicycle and pedestrian access and facilities in new development projects that link to the City and regional bicycle and pedestrian path connections.

**C 4.2: Bicycle Facilities on Transit.** Encourage bicycle transport on Caltrain and SamTrans (especially to the College of San Mateo). Provide an adequate supply of secure covered bicycle parking at the Caltrain stations.

**C 4.3: Dedication of Needed Right-of-Way for Bikeways.** Require dedication of necessary rights-of-way for bike lanes and paths shown on Figure C-5, which are deficient in land area. Dedication shall be required where the development project contributes to the need for the bikeways improvement and where the cost of dedication is not so disproportionate to the size of the project to make it unreasonable.

**C 4.4: Pedestrian Circulation.** Develop a pedestrian master plan and prioritized capital improvement program that creates and maintains a walkable environment in San Mateo and supports the City's Sustainable Transportation Actions.

**C 4.5: Pedestrian Enhancements with New Development.** Continue to require as a condition of development project approval the provision of sidewalks and wheelchair ramps where lacking and the repair or replacement of damaged sidewalks. Require that utility poles, signs, street lights, and street landscaping on sidewalks be placed and maintained to permit wheelchair access and pedestrian use. Increase awareness of existing trails and routes by promoting these amenities to residents.

**C 4.6: Wheelchair Access and Pedestrian Accessibility.** Continue to assess and improve wheelchair access throughout the City. Install wheelchair ramps or take other



corrective measures where most needed in accordance with the established Citywide Wheelchair Program.

- C 4.7: Pedestrian Safety.** Pedestrian safety shall be made a priority in the design of intersection and other roadway improvements.
- C 4.8: Pedestrian and Bicycle Mobility Needs.** Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation.
- C 4.9: Pedestrian and Bicycle Connections.** Implement an area-wide pedestrian and bicycle circulation plan which will result in convenient and direct connections throughout the Rail Corridor Transit-Oriented Development Plan (Corridor Plan) area and into adjacent neighborhoods and districts.
- C 4.10: Bikeway Systems.** Review the City's planned bikeways systems for adequacy, consistency and connectivity throughout the City to facilitate ease of use and safety for the users.
- C 4.11: Citywide Bikeways and Pedestrian Master Plan.** Develop a Citywide Bikeways and Pedestrian Master Plan to outline strategies for improving bicycling and walking conditions in San Mateo, while raising the profile of bicycling and walking as modes of transportation.
- C 4.12: Hillsdale Bicycle and Pedestrian Over Crossing.** Construct a bicycle and pedestrian over crossing in the vicinity of Hillsdale Boulevard over US 101.

The above policy provisions would provide for continued and improved pedestrian and bicycle opportunities and therefore the impact bicycle and pedestrian facilities is a **less than significant** level.

### Mitigation Measures

None required.

### **Roadway Safety and Emergency Access**

**Impact 4.4.4** Implementation of the proposed General Plan Update would result in an increase in traffic volumes, which would increase the potential opportunities for safety conflicts. This impact is considered **less than significant**.

While implementation of the proposed General Plan Update would increase the amount of vehicle traffic and the number of potential safety conflicts, implementation of the proposed General Plan Update and modern construction design standards would also result in the provision of facilities without unacceptable safety conflicts. In addition, current City and state requirements require the provision of emergency access for emergency response and evacuation.

The City conducts site reviews of traffic conditions based on complaints from the community or as otherwise brought to the City's attention. Many times, safety improvements are implemented as a result of a site review to mitigate an unsafe condition. The need for safety improvement mitigations are the result of an increase in the cumulative traffic added to the City's roadway network.

## 4.4 TRANSPORTATION AND CIRCULATION

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### General Plan Policies and Implementation Programs

The following policy provisions in the proposed General Plan Update address roadway safety and emergency access.

- C 1.1: Minimize Traffic Diversion.** Discourage non-local and commercial traffic from using local and collector residential streets through land use restrictions and traffic control devices, where appropriate. Design existing arterial roadways to minimize the diversion of traffic onto local residential streets.
- C 1.2: Protect Local Streets.** Do not permit new medium and high density residential and commercial projects to have primary access on local streets in single-family districts, except where there are no feasible alternative routes. When warranted, construct improvements consistent with the City's Neighborhood Traffic Management Program (NTMP) on local streets to minimize the negative effects of motor vehicle traffic.
- C 1.3: Neighborhood Traffic Management.** Manage traffic and speeds on arterials, collector and local streets using techniques specified in the City's Neighborhood Traffic Management Program (NTMP).
- C 1.4: Restrict Truck Traffic.** Restrict the use of city streets by trucks not serving businesses within San Mateo as designated by City ordinance and the adopted Truck Route Program.
- C 2.1: Acceptable Levels of Service.** Maintain a Level of Service no worse than mid LOS D, average delay of 45.0 seconds, as the acceptable Level of Service for all intersections within the City.
- C 2.2: Traffic Improvement Master Plan.** Maintain a master plan for street system improvements necessary to accommodate future growth and maintain acceptable levels of service. Intended improvements within the time frame of the Plan are listed in Appendix D, and may be updated by Resolution of the City Council consistent with Policy C-2.1.
- C 2.3: Roadway Improvement Implementation.** Enact fiscal policies to provide that the roadway improvements listed in Appendix D are funded and accomplished throughout the timeframe of the General Plan to achieve the Level of Service standards set forth in Policy C-2.1
- C 2.4: Transportation Fee Ordinance.** Require new developments to pay for on-site improvements to meet the needs of development and their proportionate share of the costs for mitigating cumulative traffic impacts within the City of San Mateo. Utilize a Transportation Fee Ordinance to finance necessary off-site improvements equitably. The off-site improvements will include intersection and street improvements to maintain intersection levels of service, traffic safety improvements and improvements to reduce single occupant vehicle trips such as bicycle system enhancements, pedestrian improvements, and trip reduction measures.
- C 2.5: Traffic Studies.** Require site-specific traffic studies for development projects where there may be a substantial impact on the local street system. Traffic impacts caused by a development project are considered to be unacceptable and warrant mitigation if the addition of project traffic results in a cumulative intersection level of

- service exceeding the acceptable level established in Policy C-2.1; where there may be safety hazards created; or where there may be other substantial impacts on the circulation system.
- C 2.6: Prioritization and Timing of Roadway Improvements.** Roadway improvements shall be periodically prioritized to be correlated with the distribution and pace of development, and to reflect the degree of need for mitigation.
- C 2.7: Exceeding the Acceptable Level of Service.** In addition to paying the transportation impact fee, a development project may be required to fund off-site circulation improvements which are needed as a result of project generated traffic, if:
- a. The level of service at the intersection drops below mid-level LOS D (average delay of more than 45 seconds) when the project traffic is added, and
  - b. An intersection that operates below its level of service standard under the base year conditions experiences an increase in delay of four or more seconds, and
  - c. The needed improvement of the intersection(s) is not funded in the applicable five-year City Capital Improvement Program from the date of application approval.
- C 2.8: Traffic Signal Installation.** A development project may be required to fund signalization of off-site unsignalized intersections if warranted as a result of project generated traffic. In addition, existing conditions may warrant signalization of unsignalized intersections. A warrant analysis to determine the need for signalization shall include consideration of both existing and projected traffic and pedestrian volumes, traffic delays and interruptions, accident history, and proximity of sensitive land uses, such as schools.
- C 2.9: Dedication of Needed Right-of-Way for Roadway Improvements.** Require dedication of needed rights-of-way for roadway improvements shown in Appendix D of the General Plan, which are deficient in land area. Dedication shall be required where the development project contributes to the need for the roadway improvement and where the cost of dedication is not so disproportionate to the size of the project or traffic generated to make it unreasonable.
- C 2.10: Transportation Demand Management (TDM).** Participate in the TDM Program as outlined by the San Mateo City/County Association of Governments (C/CAG). Encourage TDM measures as a condition of approval for development projects, which are anticipated to cause substantial traffic impacts. C/CAG requires the preparation of a TDM program for all new development that would add 100 peak hour trips or more to the regional road network.

Implementation of the above policy provisions, in conjunction with enforcement of modern design standards in the construction of new roadway facilities, would ensure that construction of roadway facilities associated with the proposed General Plan Update would not result in unacceptable safety conflicts. Therefore, impacts are considered **less than significant**.

### Mitigation Measures

None required.

## 4.4 TRANSPORTATION AND CIRCULATION

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### Inadequate Parking

**Impact 4.4.5** Implementation of the proposed General Plan Update would result in an increase in parking demand. This impact is considered **less than significant**.

Implementation of the proposed General Plan Update would result in additional residential and non-residential trips and a corresponding increase in demand for motor vehicle parking. The proposed General Plan Update parking policies have the potential to impact the transportation mode choices of residents, employees, and retail customers. The City's development review process implements parking requirements that are intended to ensure that adequate numbers of parking spaces are provided and includes transportation demand measures which are designed to reduce the demand for vehicle trips and, consequently, parking. The following General Plan policies would reduce the impact on parking demand.

### Proposed General Plan Policies

The following policy provisions in the proposed General Plan Update address parking.

- C 2.10: Transportation Demand Management (TDM).** Participate in the TDM Program as outlined by the San Mateo City/County Association of Governments (C/CAG). Encourage TDM measures as a condition of approval for development projects, which are anticipated to cause substantial traffic impacts. C/CAG requires the preparation of a TDM program for all new development that would add 100 peak hour trips or more to the regional road network.
- C 2.11: Transportation Demand Management (TDM) in Rail Corridor Transit-Oriented Development Plan (Corridor Plan).** Establish and implement a TDM program consistent with the Corridor Plan policy and program requirements for development within Transit-Oriented Development (TOD) areas.
- C 2.12: Transportation Demand Management (TDM) in Downtown.** Establish and implement a TDM program for development within the Downtown Core.
- C 5.1: Parking Standards**
  - a. Review parking requirements periodically to ensure adequate parking supply as a condition of development approval.
  - b. Review parking requirements periodically to ensure adequate parking supply for change and/or expansion of land use resulting in increased parking demand.

Implementation of the above policy provisions, measures, and City parking standards would ensure adequate parking for future uses. Impacts to parking are expected to be **less than significant**.

### Mitigation Measures

None required.

### Street Reclassification

**Impact 4.4.6** Implementation of the proposed General Plan Update would result in the reclassification of three street segments from local to collector streets. The three street segments are located on a portion of S. Claremont Avenue, Edison Street, and Fifth Avenue. The reclassification of Fifth Avenue would aggregate existing truck routes onto Fifth Avenue between Humboldt and Amphlett. This impact is considered **potentially significant**.

The City is reclassifying three street segments from local to collector to provide convenient goods movement from the regional transportation system to commercial areas of San Mateo. The collector street designation is one of the roadway classifications in the City of San Mateo General Plan. Street classifications include freeways, arterials, collectors, local streets, and alleyways. According to the San Mateo General Plan, collector streets are two- to four-lane roadways that link neighborhoods to larger capacity arterials and provide access to higher intensity commercial districts, such as the South Amphlett Boulevard Commercial District. The number of vehicles should range from 1,000 to 10,000 trips per day. According to the San Mateo General Plan, local streets are two-lane roadways that are designed to solely serve adjacent land uses. The number of vehicles on local streets should range from 500 to 1,000 trips per day.

While three street segments are proposed to be reclassified from local to collector, two of the segments, including S. Claremont between 3<sup>rd</sup> and 9<sup>th</sup> and Edison St between 28<sup>th</sup> Avenue and the Hillsdale Shopping Center, are currently being used by trucks and as such the reclassification is not intended to create any increase in truck or vehicle traffic. However the reclassification of the third segment, Fifth Avenue between Humboldt and Amphlett, from local to collector would aggregate existing truck routes onto Fifth Avenue by restricting truck trips on Seventh Avenue and Ninth Avenue.

As a result, the City commissioned Hexagon Transportation Consultants Inc., Charles M. Salter Associates Noise Consultants, and Don Ballanti Certified Consulting Meteorologist to examine the following impacts pertaining to the reclassification of Fifth Avenue: truck volumes and maneuverability, on-street parking supply, street widths, roadway safety, power line clearance, damage to trees, adequacy of pavement, noise, vibration, and air quality.

### Truck Volumes

To estimate future truck traffic volumes on Fifth Avenue, existing truck traffic counts were conducted on Seventh Avenue and Ninth Avenue, east of Humboldt Street, by the City of San Mateo Public Works Department. Counts were conducted over a 72-hour period on weekdays in April 2008. The counts show that on an average day, 206 trucks utilized Seventh Avenue and Ninth Avenue. Under future conditions, the 206 truck trips on Seventh Avenue and Ninth Avenue would be reassigned to Fifth Avenue. Fifth Avenue is expected to increase from 74 truck trips to 280 trucks trips, or 18 percent of the average daily traffic under future conditions (see Table 4.4-8).

## 4.4 TRANSPORTATION AND CIRCULATION

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**TABLE 4.4-8**  
**FUTURE AVERAGE DAILY TRAFFIC – FIFTH AVENUE, EAST OF HUMBOLDT STREET**

	<b>Total</b>	<b>Other Vehicles</b>	<b>Trucks</b>	<b>Perecent</b>
Existing (ADT) From 7 <sup>th</sup> & 9 <sup>th</sup> Avenue	1388	1314	74 206	5%
Futre ADT	1594	1314	280	18%

The estimated increase in truck trips under future conditions is considered a worst-case analysis. Not all trucks would be relocated to Fifth Avenue with the reclassification. Local delivery, utility, and garbage trucks make up a portion of truck traffic and can utilize any street, whether local or collector. Therefore, some of these trucks would continue to use Seventh and Ninth avenues.

### **Truck Maneuverability**

The intersection of Humboldt Street and Fifth Avenue was checked to determine whether trucks could make the required turning maneuvers. Humboldt Street is a two-lane road that measures 43 feet wide north of Fifth Avenue and 46 feet wide south of Fifth Avenue. Fifth Avenue is also a two-lane road that measures 40 feet wide east and west of Humboldt Street. The corner curb radius is 10 feet.

Turning templates were checked for both typical delivery trucks: SU-30 (single unit trucks with a wheelbase of 30 feet) and large tractor-trailers: WB-50 (wheelbase of 50 feet). The truck turning templates show that the intersection of Humboldt Street and Fifth Avenue would be adequate to accommodate the turning movements of semi-trailer trucks, emergency vehicles, garbage trucks, and delivery vehicles (see Figures 4.4-1 through 4.4-4). Most of the trucks accessing the South Amphlett Boulevard Commercial District are of the SU-30 variety. These trucks can negotiate the turn without encroachment.

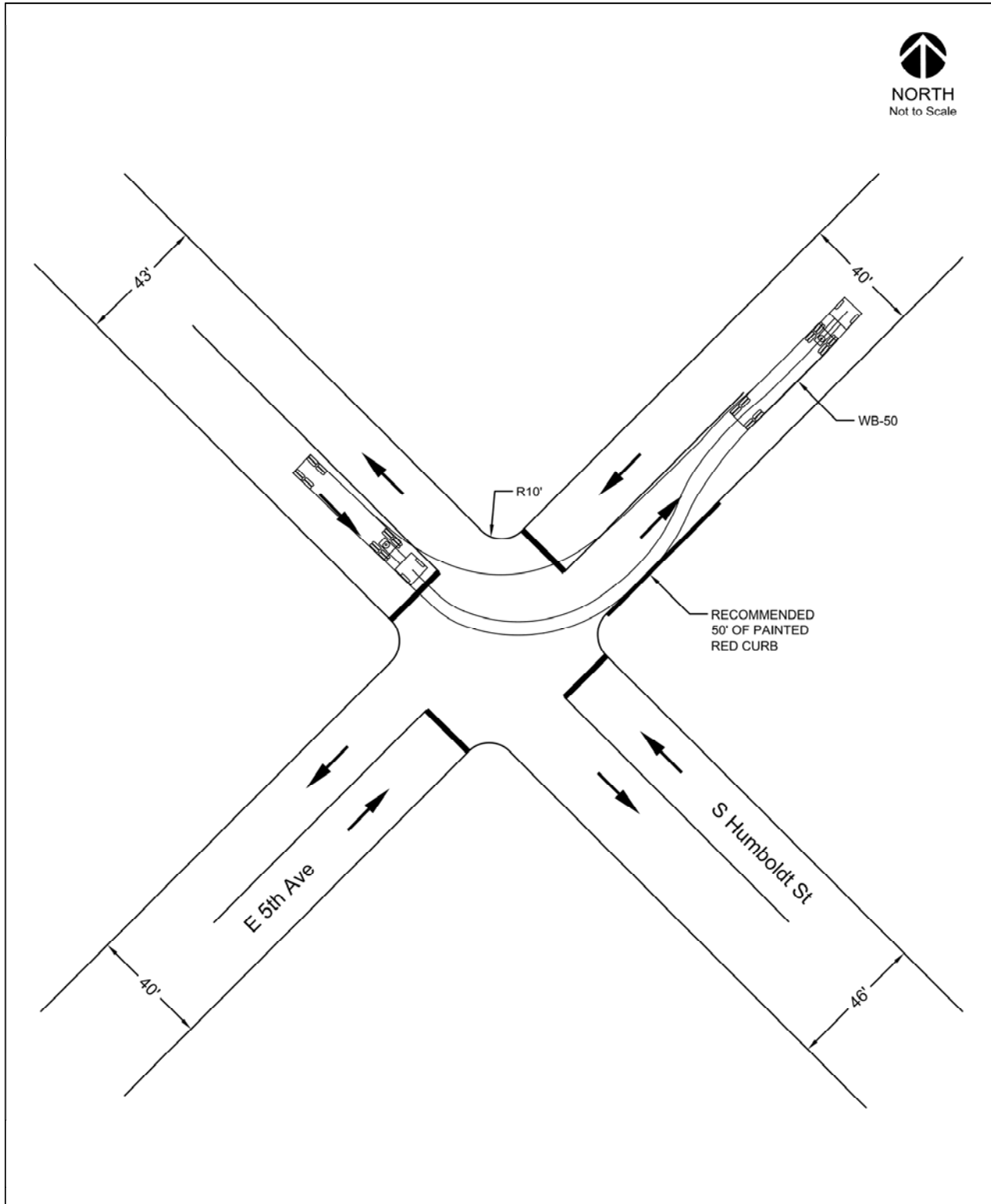
Large trucks (WB-50) would be able to negotiate the turn, but would require partial use of the opposing traffic lane and would encroach on some on-street parking spaces. Large trucks attempting to make a turn on to Humboldt Street would wait for oncoming traffic to clear before proceeding. Parked cars could complicate large truck turning by requiring even more encroachment into the opposing lane; therefore, to accommodate the tractor trailer type, 20 feet of on-street parking on the northeast side of Humboldt Street (one space) and 50 feet of on-street parking on the southeast side of 5<sup>th</sup> Avenue (two spaces) shall be restricted by painting the curb red to allow adequate space for trucks turning at the intersection of Humboldt Street and Fifth Avenue.

Based on the existing counts, up to 23 WB-50 truck trips are expected to cross the intersection per day. Given the infrequency of these large trucks, the intersection would be adequate to handle the anticipated truck traffic.

### **On-Street Parking Supply**

City of San Mateo staff conducted a parking utilization study for the intersection of Humboldt and Fifth Avenue and found that the removal of three on-street parking spaces would not adversely affect the existing neighborhood parking supply. The results show that existing parking spaces in the area were not fully utilized.

FIGURE 4.4-1  
WB-50 TRUCK TURNING – INGRESS



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FIGURE 4.4-2  
WB-50 TRUCK TURNING – EGRESS

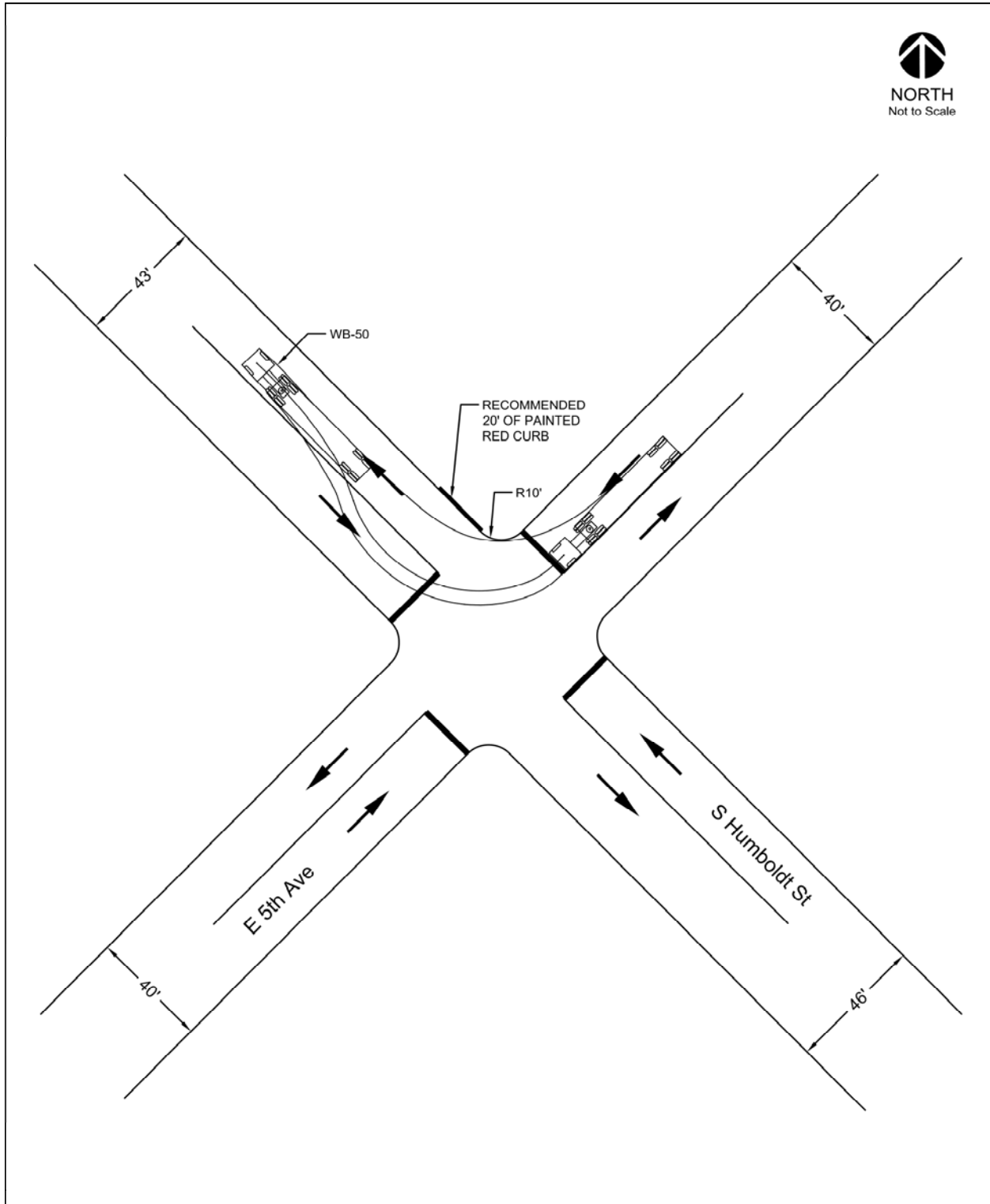
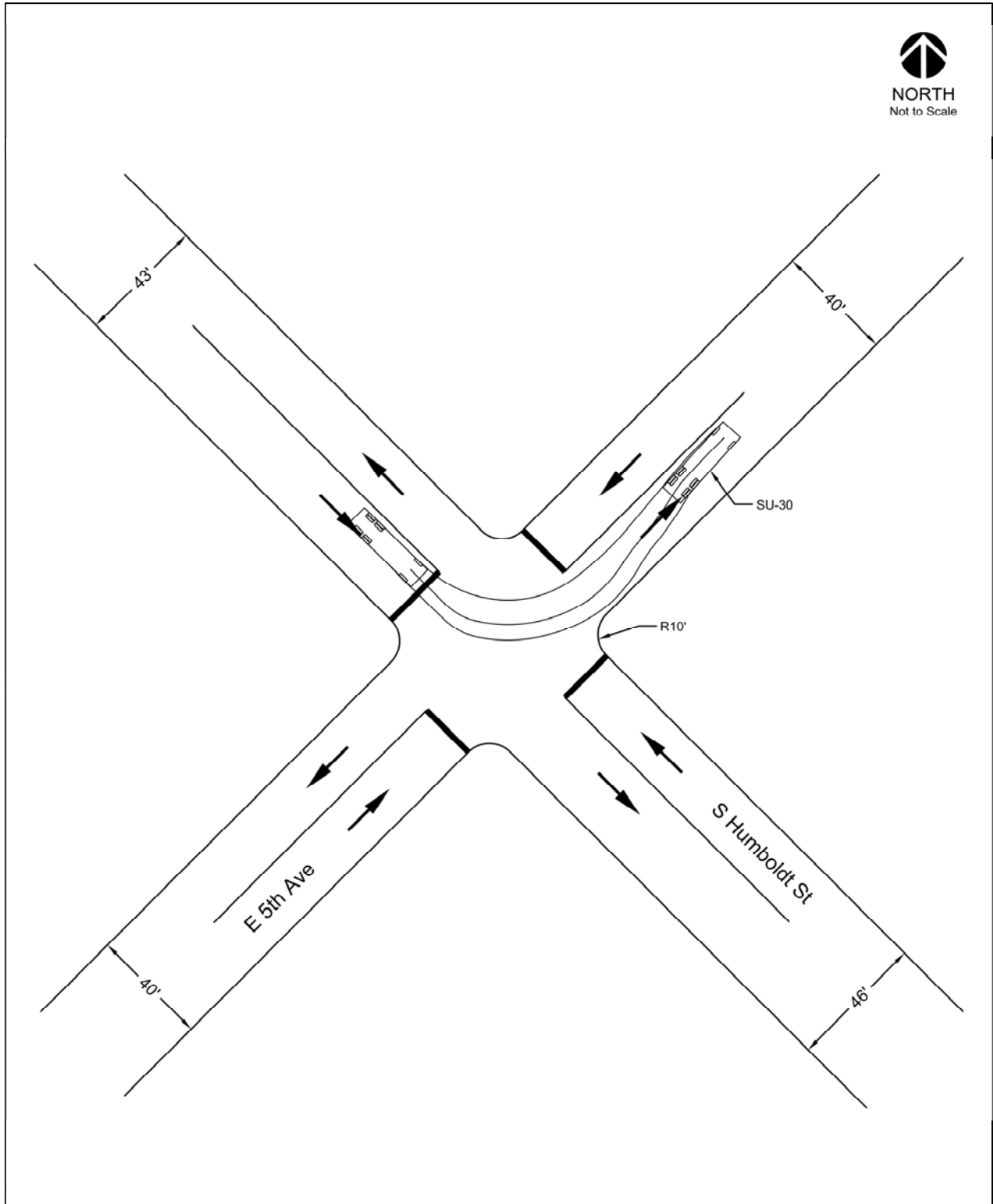


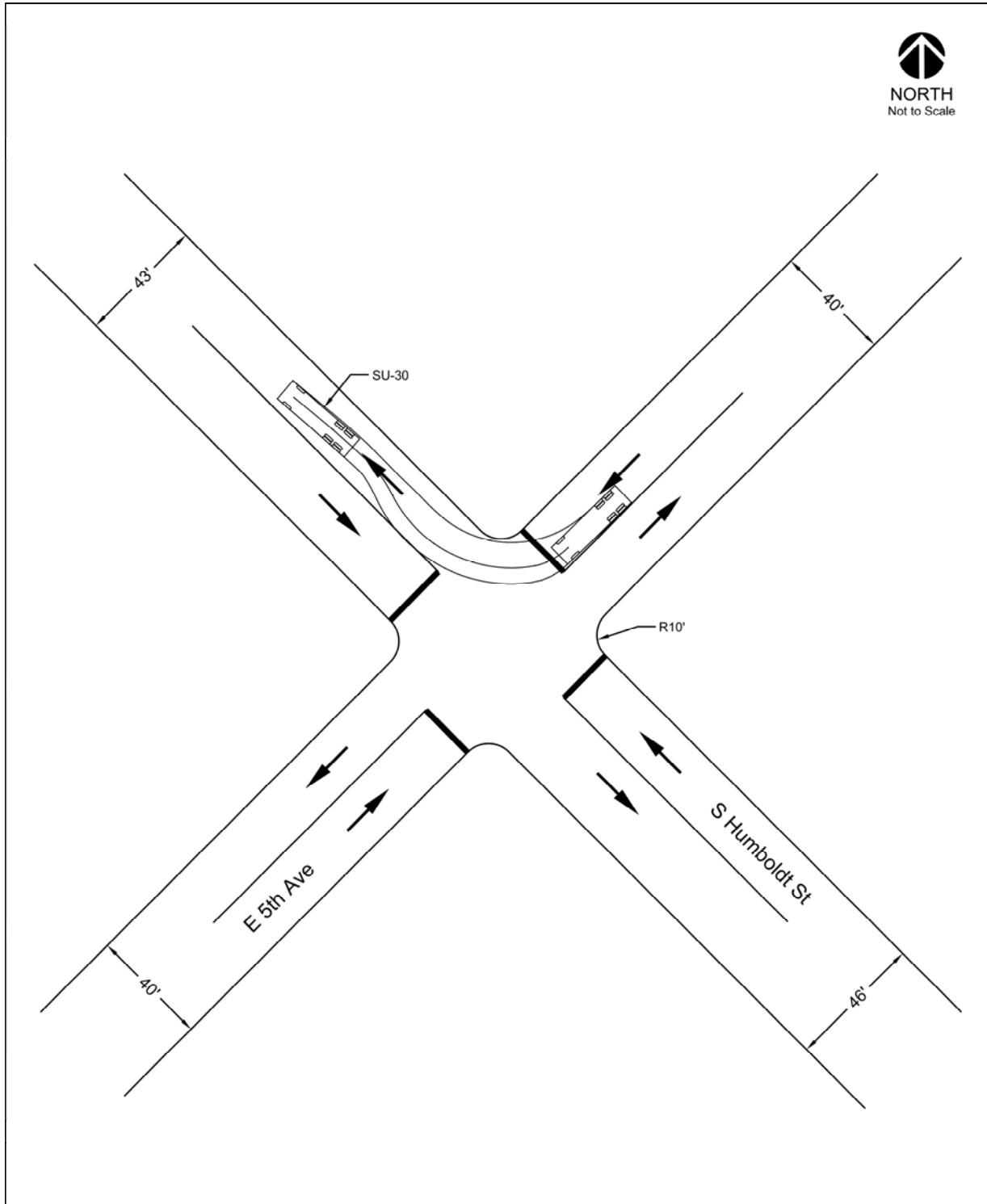


FIGURE 4.4-3  
SU-30 TRUCK TURNING – INGRESS



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FIGURE 4.4-4  
SU-30 TRUCK TURNING – EGRESS



### Street Widths

Neighborhood roadways were also checked to determine whether large trucks could maneuver through Humboldt Street and Fifth Avenue. Both streets provide on-street parking for local residents. After subtracting on-street parking widths, the remaining roadway measures 27 feet wide on Humboldt Street north of Fifth Avenue and 24 feet wide on Fifth Avenue east of Humboldt Street. Large tractor-trailers (WB-50) are up to 8.5 feet wide. Single-unit trucks are narrower. Given the existing roadway dimensions, large tractor-trailers would be able to maneuver through Humboldt Street and Fifth Avenue, even with vehicles parked on both sides of the street.

### Roadway Safety

Fifth Avenue was also checked to determine whether the proposed reclassification would allow adequately safe passage of large trucks, bikes, pedestrians, and other vehicles. Under existing and future conditions, Fifth Avenue is a standard, two-lane 40-foot-wide roadway with on-street parking. This standard roadway configuration provides space for on-street parking while allowing larger vehicles such as trucks adequate width to safely maneuver through the roadway network. The intersection of Humboldt Street and Fifth Avenue does present maneuvering difficulties for some large truck turning movements. As mitigated, removal of three on-street parking spaces would provide safe maneuvering for large trucks through the intersection. Overall, the Fifth Avenue provides adequate roadway safety for large trucks, bikes, pedestrians, and other vehicles.

### Adequacy of Pavement

Heavy trucks, such as eighteen wheel semi-trailers, produce disproportionate wear and tear on the roadway. The Fifth Avenue reclassification as a collector street is expected to result in additional truck trips on the roadway. A traffic index assessment was conducted to determine the required pavement structure for the additional truck trips.

Vehicle counts conducted by the City of San Mateo Public Works Department provided the data necessary for this analysis. The truck counts were categorized as 2-axle, 3-axle, 4-axle, and 5- and 6-axle vehicles. For purposes of calculating adequate pavement standards, buses were included as 2-axle vehicles. Buses are not affected by the Fifth Avenue reclassification. Standard Caltrans methodology was used to calculate the traffic index.

The traffic index assessment shows that Fifth Avenue requires a traffic index of 7.0 to handle the existing traffic volumes. The City of San Mateo has conducted a deflection analysis in January of 2008 that shows Fifth Avenue would require an additional asphalt overlay to provide a 7.0 traffic index. The additional truck trips attributed to the Fifth Avenue reclassification would require a traffic index of 8.0, for a design life of 20 years (see Table 4.4-9). The City of San Mateo has scheduled a pavement overlay for the Fifth Avenue roadway segment to accommodate future traffic volumes as part of an ongoing street maintenance program.

The scheduled overlay to Fifth Avenue between Humboldt Street and South Amphlett Boulevard will be designed to achieve a traffic index of 8.0. As with all pavement overlays, the improvement will require temporary closure of the roadway segment.

## 4.4 TRANSPORTATION AND CIRCULATION

TABLE 4.4-9  
TRAFFIC INDEX

Vehicle Type & FHWA Class	Percent Per Vehicle Class	Total Daily Trucks /a/	ESAL - 20 Year Constants /b/	Total 20 Year ESAL /b/
2-Axle Trucks (F4, F5)	16.51%	266	1,380	367,080
3-Axle Trucks (F6)	0.64%	10	3,680	36,800
4-Axle Trucks (F7, F8)	0.06%	1	5,880	5,880
5&6-Axle Trucks (F9-F13)	1.43%	23	13,780	316,940
<hr/>				
Gross Total - 2 Ways	18.65%	300		726,700
<b>Total Per Lane</b>		<b>150</b>		<b>363,350</b>
<hr/>				
<b>Recommended Traffic Index /c/</b>	<b>8.0</b>			

/a/ Includes buses

/b/ Equivalent Single Axle Loads

/c/ Recommended Traffic Index is calculated by taking the total 20 year ESAL's per lane (363,350) and comparing the output to the *Caltrans Highway Design Manual, 2006* Table 613.3C Conversion of ESAL to Traffic Index (see Appendix C).

### Power Line Interference

Power lines potentially could be a limiting factor for collector streets. Tall vehicles, such as trucks, require 14 feet of vertical clearance. Observations show that the existing power lines on Fifth Avenue provide adequate clearance.

### Tree Canopy Clearance

Trees can be damaged if branches lie low over streets. Tall vehicles require 14 feet of vertical clearance over the travel lanes. After subtracting clearance for on-street parking spaces, 24 feet of horizontal clearance is required. Observations show that the existing tree canopy on Fifth Avenue is of adequate height and width for Fifth Avenue to serve as a collector street. The City of San Mateo will continue street tree maintenance schedules to continue to provide adequate vertical and horizontal clearance.

**Noise**

Based on the traffic volumes provided by Hexagon Transportation Consultants, the future condition assumes that there will be an increase in truck volume due to the proposed reclassification of Fifth Avenue. The noise from additional trucks using Fifth Avenue will increase the noise levels at the adjacent residence by up to 1 dB; however, this increase is not considered significant.

The Technical Noise Supplement dated October 1998, published by the California Department of Transportation states, "It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dBA."

Table 4.4-8 below summarizes the traffic data and the expected increase in noise levels of 1 dB along Fifth Avenue. The City's General Plan considers increases of less than L<sub>dn</sub> 3 dB to not be significant.

**TABLE 4.4-8  
TRAFFIC VOLUMES AND NOISE LEVEL INCREASE**

Segment	Average Daily Car Volume	Average Daily Truck Volume	Truck Percentage	Existing Ldn (dB)	Future Ldn (dB)	Change in Noise Level (dB) (dB)	Significant Increase? (> 3 dB)
Fifth Avenue, between Humboldt Street and Idaho Street	Present – 1314 Future – 1314	Present – 74 Future – 280	Present – 5% Future – 18%	64	65	+ 1	No
Fifth Avenue, between Idaho Street and Amphlett Boulevard	Present – 1314 Future – 1314	Present – 74 Future – 280	Present – 5% Future – 18%	68	68	-	No

**Vibration**

According to the Federal Transit Administration, a vibration level of 65 VdB is considered to be the threshold of human perception, while 72 VdB is considered the threshold for residential annoyance from "frequent" events (i.e., more than 70 events per day).

Existing vibration levels for six truck passbys varied from 52 VdB to 59 VdB. These measured vibration levels are below the level of human perception. Since truck passbys are not perceptible to occupants in the residences, additional truck traffic will not create a vibration impact.

Bumps and pavement irregularities were observed along Fifth Avenue. These bumps and irregularities can increase noise and vibration levels during truck passbys. The scheduled overlay to Fifth Avenue will mitigate these bumps and irregularities, and the noise and vibration levels should decrease.

## 4.4 TRANSPORTATION AND CIRCULATION

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Vibration levels from truck passbys are below the level of human perception; additional truck traffic would continue to be below the level of perception and, therefore, would not be a vibration impact.

### **Air Quality**

The reclassification of Fifth Avenue between Humboldt Street and Amphlett Boulevard from a local street to a collector street would increase exposure to diesel particulate for adjacent land uses as a result of increased truck traffic.

The proposed reclassification of a portion of Fifth Avenue from a local street to a collector street would affect local air quality along the Fifth Avenue corridor by changing the amount of truck traffic on the affected roadway. The reclassification would not generate any new diesel truck trips, but would redirect existing diesel truck traffic. Truck traffic on Seventh Avenue and Ninth Avenue would be diverted to Fifth Avenue.

A health risk analysis providing conservative estimates of health risks at sensitive receptors (residences) adjacent the new truck route was prepared.<sup>1</sup> The CAL3QHCR air dispersion model was utilized to estimate risks from diesel truck exhaust. The model predicted annual average concentrations of diesel particulate for a line of receptors 30 feet from the roadway edge and spaced at 5-meter intervals on either side of Fifth Avenue between Amphlett Boulevard and Humboldt Street.

The CAL3QHCR program was run on a one-year meteorological file for San Mateo prepared by the Bay Area Air Quality Management District. Based on the maximum concentration obtained along the affected segment of Fifth Avenue, the maximum calculated risk of cancer is 3.33 in one million. This is well below BAAQMD's significance threshold of 10 in one million and would represent a less than significant impact. In the future, this maximum estimated risk would be reduced dramatically by statewide controls and programs designed to reduce diesel particulate emissions from on-road vehicles.

### Proposed General Plan Policies

The following policy provisions in the proposed General Plan Update address street reclassification.

- C 1.3: Neighborhood Traffic Management.** Manage traffic and speeds on arterials, collector and local streets using techniques specified in the City's Neighborhood Traffic Management Program (NTMP).
- C 1.4: Restrict Truck Traffic.** Restrict the use of city streets by trucks not serving businesses within San Mateo as designated by City ordinance and the adopted Truck Route Program.

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<sup>1</sup> Memorandum from Donald Ballanti, Certified Consulting Meteorologist, to William Wanner, dated July 8, 2009.

**N 2.2: Minimize Noise Impact.** Prohibit long-term exposure increases of 3 dB ( $L_{dn}$ ) or greater at the common property line, or new uses which generate noise levels of 60 dB ( $L_{dn}$ ) or greater at the property line, excluding existing ambient noise levels.

As discussed in detail above the following impacts on the Fifth Avenue reclassification were assessed: truck volumes and maneuverability, on-street parking supply, street widths, roadway safety, power line clearance, damage to trees, adequacy of pavement, noise, vibration and air quality. The only physical change expected as a result of reclassification would be a shift in truck traffic off of Seventh Avenue and Ninth Avenue and onto Fifth Avenue. The existing 206 truck trips on Seventh Avenue and Ninth Avenue would be reassigned to Fifth Avenue. Fifth Avenue is expected to increase from 74 truck trips to 280 trucks trips per day. Only 34 trucks per day would be of the tractor-trailer type. The remainder would be smaller, single-unit trucks like delivery vehicles. To accommodate the tractor-trailer type, the following mitigation for maneuverability is required:

### Mitigation Measure for Fifth Avenue Reclassification

MM 4.4.6 Twenty (20) feet of on-street parking on the northeast side of Humboldt Street (one space) and 50 feet of on-street parking on the southeast side of Fifth Avenue (two spaces) shall be restricted by painting the curb red to allow adequate space for trucks turning at the intersection of Humboldt Street and Fifth Avenue.

The improvement listed above under mitigation measure **MM 4.4.6** would result in all impacts including truck volumes and maneuverability, on-street parking supply, street widths, roadway safety, power line clearance, damage to trees, adequacy of pavement, noise, vibration and air quality being **less than significant**.

## 4.4.4 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

### CUMULATIVE SETTING

The cumulative analysis for year 2030 takes into account planned development patterns set forth in the San Mateo County General Plan, as well as potential future urban development within the City of Belmont, City of Foster City, City of Burlingame, and Town of Hillsborough, including large-scale proposed and approved development projects identified in **Table 4.0-2**.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### **Cumulative Traffic Impacts on Freeway Operations**

**Impact 4.4.7** Implementation of the proposed General Plan Update would result in increased motor vehicle traffic, which would increase the amount of traffic on US 101 and SR 92. This impact is considered **cumulatively considerable**.

The San Mateo traffic model shows that regional growth will result in a 12 percent increase between the 2005 and the 2030 levels of daily traffic on freeways that pass through San Mateo including US 101 and SR 92. Implementation of the proposed General Plan Update would contribute to the increase in the amount of traffic on US 101 in the northbound and southbound directions and SR 92 in the eastbound and westbound directions.

## 4.4 TRANSPORTATION AND CIRCULATION

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### Freeway and Interchange Improvements

The freeway system in San Mateo County serves regional travel demand, including trips either originating in or destined for the City of San Mateo. Because of their regional function and the extremely high costs of freeway widening, it is generally not feasible for a single local jurisdiction to fund freeway improvements. However, improvements to freeways, while very expensive, have been partially funded by some local jurisdictions. The San Mateo Traffic Mitigation Program anticipates partially funding one major freeway improvement project, the SR 92 Auxiliary Lane and El Camino Real Interchange Modification Project. SR 92 is proposed to be widened to six lanes between I-280 and U.S. 101. The El Camino Real/SR 92 interchange will be examined as part of the SR 92 widening project.

The required improvements reflect the land use assumptions used to develop the 2030 traffic forecasts. It is possible that location or intensity of development in San Mateo will, in some cases, differ from that anticipated in the forecasts. Therefore, it may be necessary to also require direct funding of additional improvements to mitigate specific development impacts. This developer funding would be in addition to the fees paid under the Traffic Mitigation Fee Program. For example, the recently approved Bay Meadows Specific Plan anticipates a different mix and intensity of development on the Bay Meadows property than had been anticipated in the City's General Plan. As a result, the Bay Meadows developers will construct traffic improvements beyond those funded by Traffic Mitigation Fees.

Freeway, street, and intersection improvements will be needed to offset the impacts of future development. The City also will obtain state and federal funds to construct transportation improvements, and funds will be available through the San Mateo County Measure A, half-cent sales tax program. State, federal, and Measure A funds and direct development mitigations will combine to provide the funding necessary to supplement that which will be available through the Traffic Mitigation Fee Program. These funding sources also will fund improvements to mitigate congestion that is not a direct result of future development in San Mateo.

The projects to be fully or partially funded outside of the Traffic Mitigation Fee Program are listed below.

Freeway improvements:

- U.S. 101 Northbound Auxiliary Lanes
- State Route 92 Auxiliary Lanes and El Camino Real Interchange Improvements

### General Plan Policies and Implementation Programs

The following policy provisions of the proposed General Plan Update address traffic impacts on the freeway system in San Mateo:

- C 2.10: Transportation Demand Management (TDM).** Participate in the TDM Program as outlined by the San Mateo City/County Association of Governments (C/CAG). Encourage TDM measures as a condition of approval for development projects, which are anticipated to cause substantial traffic impacts. C/CAG requires the preparation of a TDM program for all new development that would add 100 peak hour trips or more to the regional road network.



**C 2.11: Transportation Demand Management (TDM) in Rail Corridor Transit-Oriented Development Plan (Corridor Plan).** Establish and implement a TDM program consistent with the Corridor Plan policy and program requirements for development within Transit-Oriented Development (TOD) areas.

**C 2.12: Transportation Demand Management (TDM) in Downtown.** Establish and implement a TDM program for development within the Downtown Core.

**C 3.1: Increase Bus Ridership.** Strongly promote increased bus ridership and improved accessibility to bus transit by encouraging SamTrans to implement the following bus service improvements:

- a. Evaluate the need to provide service in areas exceeding a quarter mile from local routes and designated bus stops, as shown on Figure C-4.
- b. Evaluate the need for improved bus service in high concentration employment centers, including: Downtown, Mariner's Island, Peninsula Office Park, Crossroads, and the Corridor Plan area among others as shown in the Land Use Element, Figure LU-2 (Employment Locations). Evaluate the need to improve bus service to the College of San Mateo, between schools and recreation facilities, and to special events.
- c. Promote increased usage of the Park-N-Ride lot at the US 101 and SR 92 Interchange.
- d. Promote increased bus ridership through an expanded Public Information Program such as at train stations, public institutions, and through TDM.
- e. Recognize the importance of complementary land uses, such as higher-density, compact development with pedestrian-friendly environments, to especially justify increasing levels of transit service.

**C 3.2: Caltrain.** Continue the City's strong support of Caltrain as an essential element of the overall circulation system on the Peninsula and in the City. Support the following rail service improvements:

- a. Continue to work with the Joint Powers Board which locally manages and oversees improvement plans for Caltrain.
- b. Increased service during non-commute periods and increase system capacity.
- c. Development of a Downtown San Francisco terminal within the vicinity of the Transbay Terminal or Financial District to improve commute service and linkage to other regional transit systems.
- d. Expenditure of Measure A (1/2-cent sales tax) funds and other available funds for grade crossing improvements at existing at grade crossings and where existing grade separations have inadequate vertical clearance above the crossing street.
- e. Caltrain Shuttle Bus Program

## 4.4 TRANSPORTATION AND CIRCULATION

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- f. Caltrain's Project 2025 future vision includes three major phases of development: state of good repair, electrification enhancements and post-electrification enhancements. All three phases of the program will provide increased frequency of service to San Mateo and Peninsula residents and commuters.
- LU 3.4: Rail Corridor Transit-Oriented Development Plan (Corridor Plan).** Implement the Corridor Plan to allow, encourage, and provide guidance for the creation of world class transit-oriented development (TOD) within a half-mile radius of the Hillsdale and Hayward Park Caltrain station areas, while maintaining and improving the quality of life for those who already live and work in the area. Development within the plan area shall comply with the policies of the Plan.
- LU 3.5: Transit-Oriented Development (TOD) Land Use Designation.** Maintain TOD land use designations for areas in direct proximity to the Hillsdale and Hayward Park Caltrain stations.

### Mitigation Measures

Adding auxiliary lanes to northbound US 101 and SR 92 would expand roadway capacity, thus providing acceptable operations. This roadway improvement and funding is planned and a number of General Plan policies and programs would help reduce traffic congestion on US 101 and SR 92. The impact would be reduced to **less than cumulatively considerable**.

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